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 Ser Ile Thr Ile Pro Leu Leu Gly Glu Ser Gln Asp Ser Val Ala Glu  
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 Leu Phe Ser Ile Arg Gly Gln Thr Ser Gln Gly Gly Glu Pro Val Ala  
 485 490 495  
 Arg Pro Ser Ser Leu Arg Met Leu Leu Thr Lys Pro Thr His Thr Val  
 500 505 510  
 His Tyr Tyr Trp Arg Lys Phe Asp Asn Ala Phe Met Arg Pro Val Phe  
 515 520 525  
 Gly Gly Arg Gly Phe Val Pro Tyr Val Pro Gly Ser Pro Thr Glu Arg  
 530 535 540  
 Ser Val Arg Asn Trp Glu Glu Glu Thr Lys Gln  
 545 550 555

<210> 7  
 <211> 542  
 <212> PRT  
 <213> Ipomoea tricolor

<400> 7  
 Met Ala Phe Gly Leu Ser Ser Leu Leu Gln Asn Ser Glu Leu Phe Thr  
 1 5 10 15  
 Ser Asp His Ala Ser Val Val Ser Met Asn Leu Phe Val Ala Leu Leu  
 20 25 30  
 Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg Trp Val



	35					40				45					
Asn	Glu	Ser	Ile	Thr	Ala	Leu	Ile	Ile	Gly	Leu	Cys	Thr	Gly	Val	Val
	50					55				60					
Ile	Leu	Leu	Leu	Ser	Arg	Gly	Lys	Ser	Ser	His	Leu	Leu	Val	Phe	Ser
65					70					75				80	
Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	Phe	Asn	Ala
				85					90					95	
Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Val	Asn	Phe	Met	Thr	Ile	
		100					105					110			
Met	Leu	Phe	Gly	Ala	Ile	Gly	Thr	Leu	Ile	Ser	Cys	Ser	Ile	Ile	Ser
		115					120					125			
Phe	Gly	Ala	Val	Lys	Ile	Phe	Lys	His	Leu	Asp	Ile	Asp	Phe	Leu	Asp
	130					135					140				
Phe	Gly	Asp	Tyr	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ala	Ala	Thr	Asp	Ser
145					150					155					160
Val	Cys	Thr	Leu	Gln	Val	Leu	Ser	Gln	Asp	Glu	Thr	Pro	Leu	Leu	Tyr
				165					170					175	
Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser	Val	Val
			180					185					190		
Leu	Phe	Asn	Ala	Ile	Gln	Ser	Phe	Asp	Met	Thr	Ser	Phe	Asp	Pro	Lys
		195					200					205			
Ile	Gly	Leu	His	Phe	Ile	Gly	Asn	Phe	Leu	Tyr	Leu	Phe	Leu	Ser	Ser
	210					215					220				
Thr	Phe	Leu	Gly	Val	Gly	Ile	Gly	Leu	Leu	Cys	Ala	Tyr	Ile	Ile	Lys
225					230					235					240
Lys	Leu	Tyr	Phe	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Val	Ala	Leu	Met
				245					250					255	
Met	Leu	Met	Ser	Tyr	Leu	Ser	Tyr	Ile	Met	Ala	Glu	Leu	Phe	Tyr	Leu
			260					265					270		
Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Cys	Gly	Ile	Val	Met	Ser	His	Tyr
		275					280					285			
Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Val	Thr	Thr	Arg	His	Ser
	290					295					300				
Phe	Ala	Thr	Leu	Ser	Phe	Val	Ala	Glu	Thr	Phe	Ile	Phe	Leu	Tyr	Val
305					310					315					320
Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	Lys	Phe	Val	Lys	Asn	Ser
			325					330					335		
Gln	Gly	Leu	Ser	Val	Ala	Val	Ser	Ser	Ile	Leu	Val	Gly	Leu	Ile	Leu
			340					345					350		
Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser	Asn	Leu
		355					360					365			
Ala	Lys	Lys	Asn	Ser	Ser	Asp	Lys	Ile	Ser	Phe	Arg	Gln	Gln	Ile	Ile
		370				375					380				
Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Ile	Ala	Leu	Ala
385				390					395						400
Tyr	Asn	Lys	Phe	Thr	Thr	Ser	Gly	His	Thr	Ser	Leu	His	Glu	Asn	Ala
			405					410					415		
Ile	Met	Ile	Thr	Ser	Thr	Val	Thr	Val	Val	Leu	Phe	Ser	Thr	Val	Val
			420				425						430		
Phe	Gly	Leu	Met	Thr	Lys	Pro	Leu	Ile	Asn	Leu	Leu	Leu	Pro	Pro	His
		435				440						445			
Lys	Gln	Ile	Ala	Ser	Gly	His	Ser	Ser	Met	Thr	Thr	Ser	Glu	Pro	Ser
		450				455						460			
Ser	Pro	Lys	His	Phe	Ala	Val	Pro	Leu	Leu	Asp	Asn	Gln	His	Asp	Ser
465					470					475					480
Glu	Ser	Asp	Met	Ile	Thr	Gly	Pro	Glu	Val	Ala	Arg	Pro	Thr	Ala	Leu
				485					490					495	

Arg Met Leu Leu Arg Thr Pro Thr His Thr Val His Arg Tyr Trp Arg  
500 505 510  
Lys Phe Asp Asp Ser Phe Met Arg Pro Val Phe Gly Gly Arg Gly Phe  
515 520 525  
Val Pro Phe Val Ala Gly Ser Pro Ala Glu Gln Ser Pro Arg  
530 535 540

<210> 8

<211> 575

<212> PRT

<213> Arabidopsis thaliana

<400> 8

Met Ile Ser Pro Val Glu His Asp Pro Gln Gly Gln Val Lys Gln Gln  
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Gln Ala Ala Gly Val Gly Ile Leu Leu Gln Ile Met Met Leu Val Leu  
20 25 30  
Ser Phe Val Leu Gly His Val Leu Arg Arg His Arg Phe His Tyr Leu  
35 40 45  
Pro Glu Ala Ser Gly Ser Leu Leu Ile Gly Leu Ile Val Gly Ile Leu  
50 55 60  
Ala Asn Ile Ser Asp Thr Glu Thr Ser Ile Arg Phe Cys Pro Pro Pro  
65 70 75 80  
Ser Ile Pro Glu Phe Ser Leu Leu Ser Phe Pro Arg Ser Leu Val Cys  
85 90 95  
Ser Phe Tyr Ser Val Ser Gly Arg Gly Leu Ile Ser Thr Lys Ser Ser  
100 105 110  
Ser Ser Cys Phe Cys Cys Leu Pro Ser Tyr Tyr Ile Leu Cys Phe Asn  
115 120 125  
Ile Cys Ile Ser Ser Phe Lys Phe Ala Ala Ala Met Leu Cys Ile Met  
130 135 140  
Asp Val Ile Phe Leu Asp Ile Ile His Leu Phe Glu Pro Ser Gln Val  
145 150 155 160  
Ser Val Phe Asn Leu Asn His Ser Phe Leu Thr Leu Glu Pro Leu Leu  
165 170 175  
Pro Leu Leu Ser Ser Glu Leu Leu Ser Leu Gln Leu Leu Val Val  
180 185 190  
Cys Tyr Leu Gly Gly Ser Met Tyr Leu Met Tyr Lys Leu Pro Phe Val  
195 200 205  
Glu Cys Leu Met Phe Gly Ala Leu Ile Ser Ala Thr Asp Pro Val Thr  
210 215 220  
Val Leu Ser Ile Phe Gln Val Leu Leu Leu Phe Leu Leu Leu Ser Val  
225 230 235 240  
Ser Thr Gly Tyr Lys Tyr Ser His Asp Val Gly Thr Asp Val Asn Leu  
245 250 255  
Tyr Ala Leu Val Phe Gly Glu Ser Val Leu Asn Asp Ala Val Ser Phe  
260 265 270  
Tyr Tyr Leu Leu Arg Tyr Trp Ala Leu Pro Phe Lys Thr Met Ser Leu  
275 280 285  
Val Asn Arg Gln Ser Ser Ser Gly Glu His Phe Phe Met Val Val Ile  
290 295 300  
Arg Phe Phe Glu Thr Phe Ala Gly Ser Met Ser Ala Gly Leu Ala Ile  
305 310 315 320  
Ser Phe Leu Asn Ser Phe Tyr Thr Val Val Phe Thr Leu Leu Ile Leu  
325 330 335  
Ser Glu His Ile Val Asn Val Met Ser Leu Phe Ser Leu Phe Ser Thr

			340					345					350				
Ser	Ile	His	Ala	Cys	Arg	Arg	Cys	Trp	Ser	Leu	Arg	His	Cys	Phe	Tyr		
		355					360					365					
Thr	Leu	His	Arg	Asn	Cys	Asn	Arg	Arg	Val	Met	Lys	Arg	Tyr	Thr	Phe		
	370					375					380						
Ser	Asn	Leu	Ser	Glu	Ala	Ser	Gln	Ser	Phe	Val	Ser	Ser	Phe	Phe	His		
385				390					395						400		
Leu	Ile	Ser	Ser	Leu	Ala	Glu	Thr	Phe	Thr	Phe	Ile	Tyr	Met	Gly	Phe		
			405					410					415				
Asp	Ile	Ala	Met	Glu	Gln	His	Ser	Trp	Ser	His	Val	Gly	Ala	Val	Asn		
		420						425				430					
Val	Phe	Gly	Cys	Ala	Tyr	Leu	Val	Asn	Leu	Phe	Arg	Gln	Glu	Asn	Gln		
	435						440					445					
Lys	Ile	Pro	Met	Lys	His	Gln	Lys	Ala	Leu	Trp	Tyr	Ser	Gly	Leu	Arg		
450						455					460						
Gly	Ala	Met	Ala	Phe	Ala	Leu	Ala	Leu	Gln	Ser	Leu	His	Asp	Leu	Pro		
465					470				475						480		
Glu	Gly	His	Gly	Gln	Ile	Ile	Phe	Thr	Ala	Thr	Thr	Thr	Ile	Val	Val		
			485					490					495				
Val	Thr	Val	Thr	Phe	Val	Leu	Leu	Ile	Gly	Gly	Ser	Thr	Gly	Lys	Met		
	500							505					510				
Leu	Glu	Ala	Leu	Glu	Val	Val	Gly	Asp	Asp	Leu	Asp	Asp	Ser	Met	Ser		
	515						520					525					
Glu	Val	Asn	Ser	Arg	Arg	Ser	Thr	Leu	Ile	Ser	Leu	Asn	Ile	Gly	Ala		
530						535					540						
Ser	Ser	Asp	Glu	Asp	Thr	Ser	Ser	Ser	Gly	Ser	Arg	Phe	Lys	Met	Lys		
545					550				555						560		
Leu	Lys	Glu	Phe	His	Lys	Thr	Gly	Asp	Gly	Asp	Gly	Asp	Gly	Glu			
			565					570					575				

<210> 9

<211> 1146

<212> PRT

<213> Arabidopsis thaliana

<400> 9

Met	Thr	Thr	Val	Ile	Asp	Ala	Thr	Met	Ala	Tyr	Arg	Phe	Leu	Glu	Glu		
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Ala	Thr	Asp	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Lys	Leu	Glu	Ser	Ser		
	20							25				30					
Pro	Val	Asp	Ala	Val	Leu	Phe	Val	Gly	Met	Ser	Leu	Val	Leu	Gly	Ile		
	35						40					45					
Ala	Ser	Arg	His	Leu	Leu	Arg	Gly	Thr	Arg	Val	Pro	Tyr	Thr	Val	Ala		
50						55					60						
Leu	Leu	Val	Ile	Gly	Ile	Ala	Leu	Gly	Ser	Leu	Glu	Tyr	Gly	Ala	Lys		
65					70				75						80		
His	Asn	Leu	Gly	Lys	Ile	Gly	His	Gly	Ile	Arg	Ile	Trp	Asn	Glu	Ile		
			85					90					95				
Asp	Pro	Glu	Leu	Leu	Leu	Ala	Val	Phe	Leu	Pro	Ala	Leu	Leu	Phe	Glu		
	100							105				110					
Ser	Ser	Phe	Ser	Met	Glu	Val	His	Gln	Ile	Lys	Arg	Cys	Leu	Gly	Gln		
	115						120					125					
Met	Val	Leu	Leu	Ala	Val	Pro	Gly	Val	Leu	Ile	Ser	Thr	Ala	Cys	Leu		
130						135					140						
Gly	Ser	Leu	Val	Lys	Val	Thr	Phe	Pro	Tyr	Glu	Trp	Asp	Trp	Lys	Thr		
145					150					155					160		

Ser Leu Leu Leu Gly Gly Leu Leu Ser Ala Thr Asp Pro Val Ala Val  
 165 170 175  
 Val Ala Leu Leu Lys Glu Leu Gly Ala Ser Lys Lys Leu Ser Thr Ile  
 180 185 190  
 Ile Glu Gly Glu Ser Leu Met Asn Asp Gly Thr Ala Ile Val Val Phe  
 195 200 205  
 Gln Leu Phe Leu Lys Met Ala Met Gly Gln Asn Ser Asp Trp Ser Ser  
 210 215 220  
 Ile Ile Lys Phe Leu Leu Lys Val Ala Leu Gly Ala Val Gly Ile Gly  
 225 230 235 240  
 Leu Ala Phe Gly Ile Ala Ser Val Ile Trp Leu Lys Phe Ile Phe Asn  
 245 250 255  
 Asp Thr Val Ile Glu Ile Thr Leu Thr Ile Ala Val Ser Tyr Phe Ala  
 260 265 270  
 Tyr Tyr Thr Ala Gln Glu Trp Ala Gly Ala Ser Gly Val Leu Thr Val  
 275 280 285  
 Met Thr Leu Gly Met Phe Tyr Ala Ala Phe Ala Arg Thr Ala Phe Lys  
 290 295 300  
 Gly Asp Ser Gln Lys Ser Leu His His Phe Trp Glu Met Val Ala Tyr  
 305 310 315 320  
 Ile Ala Asn Thr Leu Ile Phe Ile Leu Ser Gly Val Val Ile Ala Glu  
 325 330 335  
 Gly Ile Leu Asp Ser Asp Lys Ile Ala Tyr Gln Gly Asn Ser Trp Arg  
 340 345 350  
 Phe Leu Phe Leu Leu Tyr Val Tyr Ile Gln Leu Ser Arg Val Val Val  
 355 360 365  
 Val Gly Val Leu Tyr Pro Leu Leu Cys Arg Phe Gly Tyr Gly Leu Asp  
 370 375 380  
 Trp Lys Glu Ser Ile Ile Leu Val Trp Ser Gly Leu Arg Gly Ala Val  
 385 390 395 400  
 Ala Leu Ala Leu Ser Leu Ser Val Lys Gln Ser Ser Gly Asn Ser His  
 405 410 415  
 Ile Ser Lys Glu Thr Gly Thr Leu Phe Leu Phe Phe Thr Gly Gly Ile  
 420 425 430  
 Val Phe Leu Thr Leu Ile Val Asn Gly Ser Thr Thr Gln Phe Val Leu  
 435 440 445  
 Arg Leu Leu Arg Met Asp Ile Leu Pro Ala Pro Lys Lys Arg Ile Leu  
 450 455 460  
 Glu Tyr Thr Lys Tyr Glu Met Leu Asn Lys Ala Leu Arg Ala Phe Gln  
 465 470 475 480  
 Asp Leu Gly Asp Asp Glu Glu Leu Gly Pro Ala Asp Trp Pro Thr Val  
 485 490 495  
 Glu Ser Tyr Ile Ser Ser Leu Lys Gly Ser Glu Gly Glu Leu Val His  
 500 505 510  
 His Pro His Asn Gly Ser Lys Ile Gly Ser Leu Asp Pro Lys Ser Leu  
 515 520 525  
 Lys Asp Ile Arg Met Arg Phe Leu Asn Gly Val Gln Ala Thr Tyr Trp  
 530 535 540  
 Glu Met Leu Asp Glu Gly Arg Ile Ser Glu Val Thr Ala Asn Ile Leu  
 545 550 555 560  
 Met Gln Ser Val Asp Glu Ala Leu Asp Gln Val Ser Thr Thr Leu Cys  
 565 570 575  
 Asp Trp Arg Gly Leu Lys Pro His Val Asn Phe Pro Asn Tyr Tyr Asn  
 580 585 590  
 Phe Leu His Ser Lys Val Val Pro Arg Lys Leu Val Thr Tyr Phe Ala  
 595 600 605  
 Val Glu Arg Leu Glu Ser Ala Cys Tyr Ile Ser Ala Ala Phe Leu Arg

610	615	620
Ala His Thr Ile Ala Arg Gln Gln Leu Tyr Asp Phe Leu Gly Glu Ser		
625	630	635
Asn Ile Gly Ser Ile Val Ile Asn Glu Ser Glu Lys Glu Gly Glu Glu		640
	645	650
Ala Lys Lys Phe Leu Glu Lys Val Arg Ser Ser Phe Pro Gln Val Leu		655
	660	665
Arg Val Val Lys Thr Lys Gln Val Thr Tyr Ser Val Leu Asn His Leu		670
	675	680
Leu Gly Tyr Ile Glu Asn Leu Glu Lys Val Gly Leu Leu Glu Glu Lys		685
	690	695
Glu Ile Ala His Leu His Asp Ala Val Gln Thr Gly Leu Lys Lys Leu		700
705	710	715
Leu Arg Asn Pro Pro Ile Val Lys Leu Pro Lys Leu Ser Asp Met Ile		720
	725	730
Thr Ser His Pro Leu Ser Val Ala Leu Pro Pro Ala Phe Cys Glu Pro		735
	740	745
Leu Lys His Ser Lys Lys Glu Pro Met Lys Leu Arg Gly Val Thr Leu		750
	755	760
Tyr Lys Glu Gly Ser Lys Pro Thr Gly Val Trp Leu Ile Phe Asp Gly		765
770	775	780
Ile Val Lys Trp Lys Ser Lys Ile Leu Ser Asn Asn His Ser Leu His		785
	790	795
Pro Thr Phe Ser His Gly Ser Thr Leu Gly Leu Tyr Glu Val Leu Thr		800
	805	810
Gly Lys Pro Tyr Leu Cys Asp Leu Ile Thr Asp Ser Met Val Leu Cys		815
	820	825
Phe Phe Ile Asp Ser Glu Lys Ile Leu Ser Leu Gln Ser Asp Ser Thr		830
	835	840
Ile Asp Asp Phe Leu Trp Gln Glu Ser Ala Leu Val Leu Leu Lys Leu		845
	850	855
Leu Arg Pro Gln Ile Phe Glu Ser Val Ala Met Gln Glu Leu Arg Ala		860
865	870	875
Leu Val Ser Thr Glu Ser Ser Lys Leu Thr Thr Tyr Val Thr Gly Glu		880
	885	890
Ser Ile Glu Ile Asp Cys Asn Ser Ile Gly Leu Leu Leu Glu Gly Phe		895
	900	905
Val Lys Pro Val Gly Ile Lys Glu Leu Ile Ser Ser Pro Ala Ala		910
	915	920
Leu Ser Pro Ser Asn Gly Asn Gln Ser Phe His Asn Ser Ser Glu Ala		925
	930	935
Ser Gly Ile Met Arg Val Ser Phe Ser Gln Gln Ala Thr Gln Tyr Ile		940
945	950	955
Val Glu Thr Arg Ala Arg Ala Ile Ile Phe Asn Ile Gly Ala Phe Gly		960
	965	970
Ala Asp Arg Thr Leu His Arg Arg Pro Ser Ser Leu Thr Pro Pro Arg		975
	980	985
Ser Ser Ser Ser Asp Gln Leu Gln Arg Ser Phe Arg Lys Glu His Arg		990
	995	1000
Gly Leu Met Ser Trp Pro Glu Asn Ile Tyr Ala Lys Gln Gln Gln Glu		1005
	1010	1015
Ile Asn Lys Thr Thr Leu Ser Leu Ser Glu Arg Ala Met Gln Leu Ser		1020
1025	1030	1035
Ile Phe Gly Ser Met Val Asn Val Tyr Arg Arg Ser Val Ser Phe Gly		1040
	1045	1050
Gly Ile Tyr Asn Asn Lys Leu Gln Asp Asn Leu Leu Tyr Lys Lys Leu		1055
	1060	1065
		1070

Pro Leu Asn Pro Ala Gln Gly Leu Val Ser Ala Lys Ser Glu Ser Ser  
           1075                          1080                          1085  
 Ile Val Thr Lys Lys Gln Leu Glu Thr Arg Lys His Ala Cys Gln Leu  
           1090                          1095                          1100  
 Pro Leu Lys Gly Glu Ser Ser Thr Arg Gln Asn Thr Met Val Glu Ser  
 1105                          1110                          1115                          1120  
 Ser Asp Glu Glu Asp Glu Asp Glu Gly Ile Val Val Arg Ile Asp Ser  
                           1125                          1130                          1135  
 Pro Ser Lys Ile Val Phe Arg Asn Asp Leu  
                           1140                          1145

<210> 10  
 <211> 555  
 <212> PRT  
 <213> Atriplex gmelini

<400> 10  
 Met Trp Ser Gln Leu Ser Ser Leu Leu Ser Gly Lys Met Asp Ala Leu  
   1                          5                          10                          15  
 Thr Thr Ser Asp His Ala Ser Val Val Ser Met Asn Leu Phe Val Ala  
           20                          25                          30  
 Leu Leu Cys Gly Cys Ile Val Ile Gly His Leu Leu Glu Glu Asn Arg  
           35                          40                          45  
 Trp Met Asn Glu Ser Ile Thr Ala Leu Leu Ile Gly Leu Ala Thr Gly  
           50                          55                          60  
 Val Val Ile Leu Leu Ile Ser Gly Gly Lys Ser Ser His Leu Leu Val  
 65                          70                          75                          80  
 Phe Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe  
                           85                          90                          95  
 Asn Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ile  
           100                          105                          110  
 Thr Ile Val Leu Phe Gly Ala Val Gly Thr Leu Val Ser Phe Thr Ile  
           115                          120                          125  
 Ile Ser Leu Gly Ala Leu Ser Ile Phe Lys Lys Leu Asp Ile Gly Thr  
           130                          135                          140  
 Leu Glu Leu Ala Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr  
 145                          150                          155                          160  
 Asp Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu  
           165                          170                          175  
 Leu Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser  
           180                          185                          190  
 Val Val Leu Phe Asn Ala Ile Gln Ser Phe Asp Leu Thr Arg Ile Asp  
           195                          200                          205  
 His Arg Ile Ala Leu Gln Phe Met Gly Asn Phe Leu Tyr Leu Phe Ile  
           210                          215                          220  
 Ala Ser Thr Ile Leu Gly Ala Phe Thr Gly Leu Leu Ser Ala Tyr Ile  
 225                          230                          235                          240  
 Ile Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala  
           245                          250                          255  
 Leu Met Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe  
           260                          265                          270  
 Tyr Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser  
           275                          280                          285  
 His Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys  
           290                          295                          300  
 His Ala Phe Ala Thr Leu Ser Phe Val Ala Glu Val Phe Leu Phe Leu

305					310					315				320
Tyr	Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	Arg	Phe	Val Ser
				325					330					335
Asp	Ser	Pro	Gly	Ile	Ser	Val	Ala	Val	Ser	Ser	Ile	Leu	Leu	Gly Leu
			340					345					350	
Val	Met	Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Trp	Leu Met
		355					360					365		
Asn	Phe	Ala	Lys	Lys	Ser	Gln	Ser	Glu	Lys	Val	Thr	Phe	Asn	Gln Gln
	370					375					380			
Ile	Val	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Met Ala
385					390					395				400
Leu	Ala	Tyr	Asn	Gln	Phe	Thr	Arg	Ser	Gly	His	Thr	Gln	Leu	Arg Gly
				405					410				415	
Asn	Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Ser	Val	Val	Leu	Phe	Ser Thr
			420					425					430	
Met	Val	Phe	Gly	Leu	Leu	Thr	Lys	Pro	Leu	Ile	Met	Phe	Leu	Leu Pro
		435					440					445		
Gln	Pro	Lys	His	Phe	Thr	Ser	Cys	Ser	Thr	Val	Ser	Asp	Val	Gly Ser
	450					455					460			
Pro	Lys	Ser	Tyr	Ser	Leu	Pro	Leu	Leu	Glu	Gly	Asn	Gln	Asp	Tyr Glu
465					470					475				480
Val	Asp	Val	Gly	Asn	Gly	Asn	His	Glu	Asp	Thr	Thr	Glu	Pro	Arg Thr
			485					490						495
Ile	Val	Arg	Pro	Ser	Ser	Leu	Arg	Met	Leu	Leu	Asn	Ala	Pro	Thr His
			500					505					510	
Thr	Val	His	His	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Ser	Phe	Met	Arg Pro
		515					520					525		
Val	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly	Ser	Pro Thr
	530					535					540			
Glu	Gln	Ser	Thr	Asn	Asn	Leu	Val	Asp	Arg	Thr				
545					550					555				

<210> 11

<211> 985

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 11

Met	Ala	Ile	Trp	Glu	Gln	Leu	Glu	Val	Ser	Lys	Ala	His	Val	Ala Tyr
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Ala	Cys	Val	Gly	Val	Phe	Ser	Ser	Ile	Phe	Ser	Leu	Val	Ser	Leu Tyr
			20					25					30	
Val	Lys	Glu	Lys	Leu	Tyr	Ile	Gly	Glu	Ser	Thr	Val	Ala	Gly	Ile Phe
		35					40					45		
Gly	Leu	Ile	Val	Gly	Pro	Val	Cys	Leu	Asn	Trp	Phe	Asn	Pro	Leu Lys
	50					55				60				
Trp	Gly	Asn	Ser	Asp	Ser	Ile	Thr	Leu	Glu	Ile	Thr	Arg	Ile	Val Leu
65					70					75				80
Cys	Leu	Gln	Ile	Phe	Ala	Val	Ala	Val	Glu	Leu	Pro	Arg	Lys	Tyr Met
				85					90				95	
Leu	Lys	His	Trp	Val	Ser	Val	Thr	Met	Leu	Leu	Leu	Pro	Val	Met Thr
		100						105					110	
Ala	Gly	Trp	Leu	Ile	Ile	Gly	Leu	Phe	Val	Trp	Ile	Leu	Ile	Pro Gly
		115					120					125		
Leu	Asn	Phe	Ser	Ala	Ser	Leu	Leu	Ile	Ser	Ala	Cys	Ile	Thr	Ala Thr
	130					135					140			

Asp	Pro	Ile	Leu	Ala	Gln	Ser	Val	Val	Ser	Gly	Lys	Phe	Ala	Gln	Arg
145					150					155					160
Val	Pro	Gly	His	Leu	Arg	Asn	Leu	Leu	Ser	Ala	Glu	Ser	Gly	Cys	Asn
			165						170					175	
Asp	Gly	Met	Ala	Phe	Pro	Phe	Leu	Phe	Leu	Ser	Met	Asn	Leu	Ile	Leu
			180					185					190		
His	Pro	Gly	Asn	Gly	Arg	Glu	Ile	Val	Lys	Asp	Trp	Ile	Cys	Val	Thr
	195					200					205				
Ile	Leu	Tyr	Glu	Cys	Leu	Phe	Gly	Cys	Leu	Leu	Gly	Cys	Phe	Ile	Gly
	210					215					220				
Tyr	Val	Gly	Arg	Ile	Thr	Ile	Arg	Phe	Ala	Glu	Lys	Lys	Asn	Ile	Ile
225					230					235					240
Asp	Arg	Glu	Ser	Phe	Leu	Ala	Phe	Tyr	Val	Val	Leu	Ala	Phe	Met	Cys
				245					250					255	
Ala	Gly	Phe	Gly	Ser	Ile	Leu	Gly	Val	Asp	Asp	Leu	Leu	Val	Ser	Phe
			260					265					270		
Ala	Ala	Gly	Ala	Thr	Phe	Ala	Trp	Asp	Gly	Trp	Phe	Ser	Gln	Lys	Thr
			275				280					285			
Gln	Glu	Ser	Asn	Val	Ser	Thr	Val	Ile	Asp	Leu	Leu	Leu	Asn	Tyr	Ala
	290					295					300				
Tyr	Phe	Ile	Tyr	Phe	Gly	Ala	Ile	Ile	Pro	Trp	Ser	Gln	Phe	Asn	Asn
305					310					315					320
Gly	Glu	Ile	Gly	Thr	Asn	Val	Trp	Arg	Leu	Ile	Ile	Leu	Ser	Ile	Val
				325					330					335	
Val	Ile	Phe	Leu	Arg	Arg	Ile	Pro	Ala	Val	Met	Ile	Leu	Arg	Pro	Leu
			340					345					350		
Ile	Pro	Asp	Ile	Lys	Ser	Trp	Arg	Glu	Ala	Leu	Phe	Val	Gly	His	Phe
		355					360					365			
Gly	Pro	Ile	Gly	Val	Gly	Ala	Ile	Phe	Ala	Ala	Ile	Leu	Ala	Arg	Gly
	370					375					380				
Glu	Leu	Glu	Ser	Thr	Phe	Ser	Asp	Glu	Pro	Thr	Pro	Leu	Asn	Val	Val
385					390					395					400
Pro	Ser	Lys	Glu	Glu	Ser	Lys	His	Trp	Gln	Leu	Ile	Ala	Cys	Ile	Trp
				405					410					415	
Pro	Ile	Thr	Cys	Phe	Phe	Ile	Val	Thr	Ser	Ile	Ile	Val	His	Gly	Ser
			420					425					430		
Ser	Val	Ala	Ile	Ile	Thr	Leu	Gly	Arg	His	Leu	Asn	Thr	Ile	Thr	Leu
		435					440					445			
Thr	Lys	Thr	Phe	Thr	Thr	His	Thr	Thr	Asn	Gly	Asp	Asn	Gly	Lys	Ser
	450					455					460				
Ser	Trp	Met	Gln	Arg	Leu	Pro	Ser	Leu	Asp	Lys	Ala	Gly	Arg	Ser	Phe
465					470					475					480
Ser	Leu	His	Arg	Met	Asp	Thr	Gln	Met	Thr	Leu	Ser	Gly	Asp	Glu	Gly
				485					490					495	
Glu	Ala	Glu	Glu	Gly	Gly	Gly	Arg	Lys	Gly	Leu	Ala	Gly	Gly	Glu	Asp
			500					505					510		
Glu	Glu	Gly	Leu	Asn	Asn	Asp	Gln	Ile	Gly	Ser	Val	Ala	Thr	Ser	Gly
		515					520					525			
Ile	Pro	Ala	Arg	Pro	Ala	Gly	Gly	Met	Pro	Arg	Arg	Arg	Lys	Leu	Ser
	530					535						540			
Arg	Lys	Glu	Lys	Arg	Leu	Asn	Arg	Arg	Gln	Lys	Leu	Arg	Asn	Lys	Gly
545					550					555					560
Arg	Glu	Ile	Phe	Ser	Ser	Arg	Ser	Lys	Asn	Glu	Met	Tyr	Asp	Asp	Asp
				565					570					575	
Glu	Leu	Asn	Asp	Leu	Gly	Arg	Glu	Arg	Leu	Gln	Lys	Glu	Lys	Glu	Ala
		580						585					590		
Arg	Ala	Ala	Thr	Phe	Ala	Leu	Ser	Thr	Ala	Val	Asn	Thr	Gln	Arg	Asn



		595					600					605					
Glu	Glu	Ile	Gly	Met	Gly	Gly	Asp	Glu	Glu	Glu	Asp	Glu	Tyr	Thr	Pro		
	610					615					620						
Glu	Lys	Glu	Tyr	Ser	Asp	Asn	Tyr	Asn	Asn	Thr	Pro	Ser	Phe	Glu	Ser		
625					630					635					640		
Ser	Glu	Arg	Ser	Ser	Ser	Leu	Arg	Gly	Arg	Thr	Tyr	Val	Pro	Arg	Asn		
			645						650					655			
Arg	Tyr	Asp	Gly	Glu	Glu	Thr	Glu	Ser	Glu	Ile	Glu	Ser	Glu	Asp	Glu		
			660					665					670				
Met	Glu	Asn	Glu	Ser	Glu	Arg	Ser	Met	Ala	Ser	Ser	Glu	Glu	Arg	Arg		
		675				680						685					
Ile	Arg	Lys	Met	Lys	Glu	Glu	Glu	Met	Lys	Pro	Gly	Thr	Ala	Tyr	Leu		
	690					695					700						
Asp	Gly	Asn	Arg	Met	Ile	Ile	Glu	Asn	Lys	Gln	Gly	Glu	Ile	Leu	Asn		
705					710					715					720		
Gln	Val	Asp	Ile	Glu	Asp	Arg	Asn	Glu	Ala	Arg	Asp	Asp	Glu	Val	Ser		
			725					730						735			
Val	Asp	Ser	Thr	Ala	His	Ser	Ser	Leu	Thr	Thr	Thr	Met	Thr	Asn	Leu		
			740					745					750				
Ser	Ser	Ser	Ser	Gly	Gly	Arg	Leu	Lys	Arg	Ile	Leu	Thr	Pro	Thr	Ser		
		755				760						765					
Leu	Gly	Lys	Ile	His	Ser	Leu	Val	Asp	Lys	Gly	Lys	Asp	Lys	Asn	Lys		
	770					775					780						
Asn	Ser	Lys	Tyr	His	Ala	Phe	Lys	Ile	Asp	Asn	Leu	Leu	Ile	Ile	Glu		
785					790					795					800		
Asn	Glu	Asp	Gly	Asp	Val	Ile	Lys	Arg	Tyr	Lys	Ile	Asn	Pro	His	Lys		
			805						810					815			
Ser	Asp	Asp	Asp	Lys	Ser	Lys	Asn	Arg	Pro	Arg	Asn	Asp	Ser	Val	Val		
			820					825					830				
Ser	Arg	Ala	Leu	Thr	Ala	Val	Gly	Leu	Lys	Ser	Lys	Ala	Asn	Ser	Gly		
		835					840					845					
Val	Pro	Pro	Pro	Val	Asp	Glu	Glu	Lys	Ala	Ile	Glu	Gly	Pro	Ser	Arg		
	850					855					860						
Lys	Gly	Pro	Gly	Met	Leu	Lys	Lys	Arg	Thr	Leu	Thr	Pro	Ala	Pro	Pro		
865					870					875					880		
Arg	Gly	Val	Gln	Asp	Ser	Leu	Asp	Leu	Glu	Asp	Glu	Pro	Ser	Ser	Glu		
			885					890					895				
Glu	Asp	Leu	Gly	Asp	Ser	Tyr	Asn	Met	Asp	Asp	Ser	Glu	Asp	Tyr	Asp		
		900						905					910				
Asp	Asn	Ala	Tyr	Glu	Ser	Glu	Thr	Glu	Phe	Glu	Arg	Gln	Arg	Arg	Leu		
		915					920					925					
Asn	Ala	Leu	Gly	Glu	Met	Thr	Ala	Pro	Ala	Asp	Gln	Asp	Asp	Glu	Glu		
		930				935					940						
Leu	Pro	Pro	Leu	Pro	Val	Glu	Ala	Gln	Thr	Gly	Asn	Asp	Gly	Pro	Gly		
945					950					955					960		
Thr	Ala	Glu	Gly	Lys	Lys	Lys	Gln	Lys	Ser	Ala	Ala	Val	Lys	Ser	Ala		
			965					970						975			
Leu	Ser	Lys	Thr	Leu	Gly	Leu	Asn	Lys									
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 <212> PRT  
 <213> *Saccharomyces cerevisiae*

<400> 12

Met	Leu	Ser	Lys	Val	Leu	Leu	Asn	Ile	Ala	Phe	Lys	Val	Leu	Leu	Thr	1	5	10	15
Thr	Ala	Lys	Arg	Ala	Val	Asp	Pro	Asp	Asp	Asp	Asp	Glu	Leu	Leu	Pro	20	25	30	
Ser	Pro	Asp	Leu	Pro	Gly	Ser	Asp	Asp	Pro	Ile	Ala	Gly	Asp	Pro	Asp	35	40	45	
Val	Asp	Leu	Asn	Pro	Val	Thr	Glu	Glu	Met	Phe	Ser	Ser	Trp	Ala	Leu	50	55	60	
Phe	Ile	Met	Leu	Leu	Leu	Ile	Ser	Ala	Leu	Trp	Ser	Ser	Tyr	Tyr		65	70	75	80
Leu	Thr	Gln	Lys	Arg	Ile	Arg	Ala	Val	His	Glu	Thr	Val	Leu	Ser	Ile	85	90	95	
Phe	Tyr	Gly	Met	Val	Ile	Gly	Leu	Ile	Ile	Arg	Met	Ser	Pro	Gly	His	100	105	110	
Tyr	Ile	Gln	Asp	Thr	Val	Thr	Phe	Asn	Ser	Ser	Tyr	Phe	Phe	Asn	Val	115	120	125	
Leu	Leu	Pro	Pro	Ile	Ile	Leu	Asn	Ser	Gly	Tyr	Glu	Leu	Asn	Gln	Val	130	135	140	
Asn	Phe	Phe	Asn	Asn	Met	Leu	Ser	Ile	Leu	Ile	Phe	Ala	Ile	Pro	Gly	145	150	155	160
Thr	Phe	Ile	Ser	Ala	Val	Val	Ile	Gly	Ile	Ile	Leu	Tyr	Ile	Trp	Thr	165	170	175	
Phe	Leu	Gly	Leu	Glu	Ser	Ile	Asp	Ile	Ser	Phe	Ala	Asp	Ala	Met	Ser	180	185	190	
Val	Gly	Ala	Thr	Leu	Ser	Ala	Thr	Asp	Pro	Val	Thr	Ile	Leu	Ser	Ile	195	200	205	
Phe	Asn	Ala	Tyr	Lys	Val	Asp	Pro	Lys	Leu	Tyr	Thr	Ile	Ile	Phe	Gly	210	215	220	
Glu	Ser	Leu	Leu	Asn	Asp	Ala	Ile	Ser	Ile	Val	Met	Phe	Glu	Thr	Cys	225	230	235	240
Gln	Lys	Phe	His	Gly	Gln	Pro	Ala	Thr	Phe	Ser	Ser	Val	Phe	Glu	Gly	245	250	255	
Ala	Gly	Leu	Phe	Leu	Met	Thr	Phe	Ser	Val	Ser	Leu	Leu	Ile	Gly	Val	260	265	270	
Leu	Ile	Gly	Ile	Leu	Val	Ala	Leu	Leu	Leu	Lys	His	Thr	His	Ile	Arg	275	280	285	
Arg	Tyr	Pro	Gln	Ile	Glu	Ser	Cys	Leu	Ile	Leu	Leu	Ile	Ala	Tyr	Glu	290	295	300	
Ser	Tyr	Phe	Phe	Ser	Asn	Gly	Cys	His	Met	Ser	Gly	Ile	Val	Ser	Leu	305	310	315	320
Leu	Phe	Cys	Gly	Ile	Thr	Leu	Lys	His	Tyr	Ala	Tyr	Tyr	Asn	Met	Ser	325	330	335	
Arg	Arg	Ser	Gln	Ile	Thr	Ile	Lys	Tyr	Ile	Phe	Gln	Leu	Leu	Ala	Arg	340	345	350	
Leu	Ser	Glu	Asn	Phe	Ile	Phe	Ile	Tyr	Leu	Gly	Leu	Glu	Leu	Phe	Thr	355	360	365	
Glu	Val	Glu	Leu	Val	Tyr	Lys	Pro	Leu	Leu	Ile	Ile	Val	Ala	Ala	Ile	370	375	380	
Ser	Ile	Cys	Val	Ala	Arg	Trp	Cys	Ala	Val	Phe	Pro	Leu	Ser	Gln	Phe	385	390	395	400
Val	Asn	Trp	Ile	Tyr	Arg	Val	Lys	Thr	Ile	Arg	Ser	Met	Ser	Gly	Ile	405	410	415	
Thr	Gly	Glu	Asn	Ile	Ser	Val	Pro	Asp	Glu	Ile	Pro	Tyr	Asn	Tyr	Gln	420	425	430	
Met	Met	Thr	Phe	Trp	Ala	Gly	Leu	Arg	Gly	Ala	Val	Gly	Val	Ala	Leu	435	440	445	
Ala	Leu	Gly	Ile	Gln	Gly	Glu	Tyr	Lys	Phe	Thr	Leu	Leu	Ala	Thr	Val				

450	455	460
Leu Val Val Val Val	Leu Thr Val Ile Ile	Phe Gly Gly Thr Thr Ala
465	470	475
Gly Met Leu Glu Val	Leu Asn Ile Lys Thr	Gly Cys Ile Ser Glu Glu
485	490	495
Asp Thr Ser Asp Asp	Glu Phe Asp Ile Glu	Ala Pro Arg Ala Ile Asn
500	505	510
Leu Leu Asn Gly Ser Ser	Ile Gln Thr Asp Leu	Gly Pro Tyr Ser Asp
515	520	525
Asn Asn Ser Pro Asp	Ile Ser Ile Asp Gln	Phe Ala Val Ser Ser Asn
530	535	540
Lys Asn Leu Pro Asn	Asn Ile Ser Thr Thr	Gly Gly Asn Thr Phe Gly
545	550	555
Gly Leu Asn Glu Thr	Glu Asn Thr Ser Pro	Asn Pro Ala Arg Ser Ser
565	570	575
Met Asp Lys Arg Asn	Leu Arg Asp Lys Leu	Gly Thr Ile Phe Asn Ser
580	585	590
Asp Ser Gln Trp Phe	Gln Asn Phe Asp Glu	Gln Val Leu Lys Pro Val
595	600	605
Phe Leu Asp Asn Val	Ser Pro Ser Leu Gln	Asp Ser Ala Thr Gln Ser
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Pro Ala Asp Phe Ser	Ser Gln Asn His	
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<211> 546

<212> PRT

<213> Arabidopsis thaliana

<400> 13

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Cys Ala Cys Ile Val Ile Gly His Leu Leu Glu Glu Asn Arg Trp Met
35 40 45
Asn Glu Ser Ile Thr Ala Leu Leu Ile Gly Leu Gly Thr Gly Val Val
50 55 60
Ile Leu Leu Ile Ser Arg Gly Lys Asn Ser His Leu Leu Val Phe Ser
65 70 75 80
Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala
85 90 95
Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Val Thr Ile
100 105 110
Met Ala Phe Gly Ala Ile Gly Thr Val Val Ser Cys Thr Ile Ile Ser
115 120 125
Leu Gly Ala Ile Gln Phe Phe Lys Lys Leu Asp Ile Gly Thr Phe Asp
130 135 140
Leu Gly Asp Phe Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr Asp Ser
145 150 155 160
Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu Leu Tyr
165 170 175
Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val
180 185 190
Leu Phe Asn Ala Ile Gln Ser Phe Asp Leu Thr His Leu Asn His Glu
195 200 205

Ala Ala Phe Gln Phe Leu Gly Asn Phe Phe Tyr Leu Phe Leu Leu Ser  
 210 215 220  
 Thr Gly Leu Gly Val Ala Thr Gly Leu Ile Ser Ala Tyr Val Ile Lys  
 225 230 235 240  
 Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met  
 245 250 255  
 Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Ala Leu  
 260 265 270  
 Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His Tyr  
 275 280 285  
 Thr Trp His Asn Val Thr Glu Ser Ser Arg Ile Thr Thr Lys His Ala  
 290 295 300  
 Phe Ala Thr Leu Ser Phe Leu Ala Glu Thr Phe Ile Phe Leu Tyr Val  
 305 310 315 320  
 Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Arg Phe Val Ser Asp Ser  
 325 330 335  
 Pro Gly Thr Ser Val Ala Val Ser Ser Ile Leu Met Gly Leu Val Met  
 340 345 350  
 Leu Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn Leu  
 355 360 365  
 Ala Lys Lys His Gln Ser Glu Lys Ile Ser Ile Lys Gln Gln Val Val  
 370 375 380  
 Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu Ala  
 385 390 395 400  
 Tyr Asn Lys Phe Thr Arg Ser Gly His Thr Glu Leu Arg Gly Asn Ala  
 405 410 415  
 Ile Met Ile Thr Ser Thr Ile Thr Val Cys Leu Phe Ser Thr Met Val  
 420 425 430  
 Phe Gly Met Leu Thr Lys Pro Leu Ile Arg Tyr Leu Met Pro His Gln  
 435 440 445  
 Lys Ala Thr Thr Ser Thr Thr Ser Met Leu Ser Asp Asp Ser Thr Pro  
 450 455 460  
 Lys Ser Ile His Ile Pro Leu Leu Asp Gly Glu Gln Leu Asp Ser Phe  
 465 470 475 480  
 Glu Leu Pro Gly Ser His Gln Asp Val Pro Arg Pro Asn Ser Leu Arg  
 485 490 495  
 Gly Phe Leu Met Arg Pro Thr Arg Thr Val His Tyr Tyr Trp Arg Gln  
 500 505 510  
 Phe Asp Asp Ala Phe Met Arg Pro Val Phe Gly Gly Arg Gly Phe Val  
 515 520 525  
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 530 535 540  
 Lys Pro  
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<211> 529

<212> PRT

<213> Arabidopsis thaliana

<400> 14

Met Ser Ile Gly Leu Thr Glu Phe Val Thr Asn Lys Leu Ala Ala Glu  
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 20 25 30  
 Cys Leu Val Ile Gly His Leu Leu Glu Glu Asn Arg Trp Val Asn Glu



Gln Pro Val Tyr Thr Ile His Arg Tyr Trp Arg Lys Phe Asp Asp Thr  
500 505 510  
Tyr Met Arg Pro Ile Phe Gly Gly Pro Arg Arg Glu Asn Gln Pro Glu  
515 520 525  
Cys

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<212> PRT  
<213> Arabidopsis thaliana

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Ala Ser Asp His Ala Ser Val Val Ser Met Asn Leu Phe Val Ala Leu  
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Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Thr Arg Trp  
35 40 45  
Met Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Ser Cys Thr Gly Ile  
50 55 60  
Val Ile Leu Leu Ile Ser Gly Gly Lys Ser Ser Arg Ile Leu Val Phe  
65 70 75 80  
Ser Glu Asp Leu Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn  
85 90 95  
Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Met Thr  
100 105 110  
Ile Met Leu Phe Gly Ala Ile Gly Thr Leu Ile Ser Phe Val Ile Ile  
115 120 125  
Ser Phe Gly Ala Lys His Leu Phe Glu Lys Met Asn Ile Gly Asp Leu  
130 135 140  
Thr Ile Ala Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp  
145 150 155 160  
Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu Leu  
165 170 175  
Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val  
180 185 190  
Val Leu Phe Asn Ala Ile Gln Arg Phe Asp Leu Thr Asn Ile Asn Ser  
195 200 205  
Ala Ile Ala Leu Glu Phe Ala Gly Asn Phe Phe Tyr Leu Phe Ile Leu  
210 215 220  
Ser Thr Ala Leu Gly Val Ala Ala Gly Leu Leu Ser Ala Phe Val Ile  
225 230 235 240  
Lys Lys Leu Tyr Ile Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu  
245 250 255  
Met Met Leu Leu Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe His  
260 265 270  
Leu Ser Ser Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His  
275 280 285  
Tyr Thr Trp His Asn Val Thr Asp Lys Ser Lys Val Thr Thr Lys His  
290 295 300  
Thr Phe Ala Ala Met Ser Phe Leu Ala Glu Ile Phe Ile Phe Leu Tyr  
305 310 315 320  
Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Asp Val Val Arg Asn  
325 330 335  
Ser Pro Gly Gln Ser Ile Gly Val Ser Ser Ile Leu Leu Gly Leu Ile



Leu Asn Asp Ala Val Ser Phe Tyr Tyr Leu Leu Arg Tyr Trp Ala Leu  
 180 185 190  
 Pro Phe Lys Phe Phe Glu Thr Phe Ala Gly Ser Met Ser Ala Glu His  
 195 200 205  
 Leu Phe Lys Tyr Ala Gly Leu Asp Thr Glu Asn Leu Gln Asn Leu Glu  
 210 215 220  
 Cys Cys Leu Phe Val Leu Phe Pro Tyr Phe Ser Tyr Met Leu Ala Glu  
 225 230 235 240  
 Gly Val Gly Leu Ser Gly Ile Val Ser Ile Leu Phe Thr Gly Ile Val  
 245 250 255  
 Met Lys Arg Tyr Thr Phe Ser Asn Leu Ser Glu Ala Ser Gln Ser Phe  
 260 265 270  
 Val Ser Ser Phe Phe His Leu Ile Ser Ser Leu Ala Glu Thr Phe Thr  
 275 280 285  
 Phe Ile Tyr Met Gly Phe Asp Ile Ala Met Glu Gln His Ser Trp Ser  
 290 295 300  
 His Val Gly Phe Ile Leu Phe Ser Ile Val Ser Ser Phe Thr Asp Arg  
 305 310 315 320  
 Gln Ala Val Asn Val Phe Gly Cys Ala Tyr Leu Val Asn Leu Phe Arg  
 325 330 335  
 Gln Glu Asn Gln Lys Ile Pro Met Lys His Gln Lys Ala Leu Trp Tyr  
 340 345 350  
 Ser Gly Leu Arg Gly Ala Met Ala Phe Ala Leu Ala Leu Gln Ser Leu  
 355 360 365  
 His Asp Leu Pro Glu Gly His Gly Gln Ile Ile Phe Thr Ala Thr Thr  
 370 375 380  
 Thr Ile Val Val Val Thr Val Leu Leu Ile Gly Gly Ser Thr Gly Lys  
 385 390 395 400  
 Met Leu Glu Ala Leu Glu Val Val Gly Asp Asp Leu Asp Asp Ser Met  
 405 410 415  
 Ser Glu Gly Phe Glu Glu Ser Asp His Gln Tyr Val Pro Pro Pro Phe  
 420 425 430  
 Ser Ile Gly Ala Ser Ser Asp Glu Asp Thr Ser Ser Ser Gly Ser Arg  
 435 440 445  
 Phe Lys Met Lys Leu Lys Glu Phe His Lys Thr Thr Thr Ser Phe Thr  
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 Asp Gly Asp Gly Asp Gly Glu  
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<211> 531

<212> PRT

<213> Arabidopsis thaliana

<400> 17

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 20 25 30  
 Met Met Leu Val Leu Ser Phe Val Leu Gly His Val Leu Arg Arg His  
 35 40 45  
 Lys Phe Tyr Tyr Leu Pro Glu Ala Ser Ala Ser Leu Leu Ile Gly Leu  
 50 55 60  
 Ile Val Gly Gly Leu Ala Asn Ile Ser Asn Thr Glu Thr Ser Ile Arg



65					70					75				80	
Phe	Val	Glu	Leu	Phe	Leu	Ile	Ser	Phe	Phe	Arg	His	Gly	Ser	Ile	Ser
				85					90					95	
Thr	Met	Ser	Ser	Ser	Phe	Cys	Phe	Cys	Cys	Leu	Pro	Ser	Tyr	Tyr	Ile
			100					105					110		
Leu	Lys	Ile	Glu	Tyr	Leu	Gly	Gly	Val	Met	Phe	Leu	Met	Tyr	Arg	Leu
		115				120						125			
Pro	Phe	Val	Glu	Cys	Leu	Met	Phe	Gly	Ser	Leu	Ile	Ser	Ala	Thr	Asp
	130					135					140				
Pro	Val	Thr	Val	Leu	Ser	Ile	Phe	Gln	Glu	Leu	Gly	Ser	Asp	Val	Asn
145					150					155					160
Leu	Tyr	Ala	Leu	Val	Phe	Gly	Glu	Ser	Val	Leu	Asn	Asp	Ala	Asp	Glu
			165						170					175	
Ile	Val	Thr	Leu	Leu	Ile	Arg	Ser	Phe	Ser	Phe	Leu	Cys	Cys	Phe	Trp
		180						185				190			
Gln	Met	Ala	Ile	Ser	Leu	Tyr	Arg	Thr	Met	Ser	Leu	Val	Arg	Ser	His
	195						200					205			
Ser	Ser	Gly	Gln	Asn	Phe	Phe	Met	Val	Ile	Val	Arg	Phe	Leu	Glu	Thr
	210					215					220				
Phe	Val	Gly	Ser	Met	Ser	Ala	Ala	Met	Lys	Tyr	Phe	Ile	Leu	Met	Tyr
225				230						235					240
Ser	Leu	Leu	Leu	Ser	Val	Tyr	Arg	Thr	Trp	Ser	Ala	Val	Ser	Ser	Tyr
			245						250					255	
Phe	Phe	His	Ile	Ser	Arg	Asn	Lys	Thr	Leu	Leu	Phe	Tyr	Thr	Ser	Tyr
		260						265					270		
Val	Ser	Ile	Tyr	Phe	Thr	Leu	Ile	Glu	Ile	Val	Gln	Phe	Val	Met	Lys
		275					280					285			
His	Tyr	Thr	Tyr	Ser	Asn	Leu	Ser	Ala	Asn	Ser	Gln	Arg	Phe	Val	Ser
	290					295					300				
Ala	Phe	Phe	His	Leu	Ile	Ser	Ser	Leu	Ala	Glu	Thr	Phe	Val	Phe	Ile
305				310						315					320
Tyr	Met	Gly	Phe	Asp	Ile	Ala	Met	Glu	Lys	His	Ser	Trp	Ala	Ala	Asn
			325						330					335	
Val	Phe	Gly	Cys	Gly	Tyr	Leu	Val	Asn	Leu	Ala	Arg	Pro	Ala	His	Arg
		340						345					350		
Lys	Ile	Pro	Met	Thr	His	Gln	Lys	Ala	Leu	Trp	Tyr	Ser	Gly	Lys	Ile
	355					360						365			
Leu	Leu	Cys	Val	Pro	Leu	Ser	Ser	Tyr	Cys	Phe	Tyr	Ser	Ser	Val	Ile
	370					375					380				
Asn	Thr	Lys	Ile	Cys	Gly	Phe	Cys	Ile	Gly	Leu	Arg	Gly	Ala	Met	Ala
385				390						395					400
Phe	Ala	Leu	Ala	Leu	Gln	Ser	Val	His	Asp	Leu	Pro	Glu	Gly	His	Gly
			405						410					415	
Gln	Thr	Ile	Phe	Thr	Ala	Thr	Thr	Ala	Ile	Val	Val	Leu	Thr	Val	Leu
		420						425					430		
Leu	Ile	Gly	Gly	Ser	Thr	Gly	Thr	Met	Leu	Glu	Ala	Leu	Glu	Val	Val
	435						440					445			
Gly	Asp	Ser	His	Asp	Thr	Ser	Leu	Gly	Asp	Gly	Phe	Glu	Val	Val	Asn
	450					455					460				
Ser	Arg	Tyr	Met	Thr	Ser	Tyr	Asp	Asp	Glu	Asp	Thr	Pro	Pro	Gly	Ser
465					470					475					480
Gly	Phe	Arg	Thr	Lys	Leu	Arg	Glu	Phe	His	Lys	Ser	Ala	Ala	Ser	Phe
			485						490					495	
Thr	Glu	Leu	Asp	Arg	Asn	Tyr	Leu	Thr	Pro	Phe	Phe	Thr	Ser	Asn	Asn
		500						505					510		
Gly	Asp	Tyr	Asp	Asp	Glu	Gly	Asn	Met	Glu	Gln	His	His	Gly	Asn	Asn
	515						520					525			

Ile Ile Leu  
530

<210> 18  
<211> 697  
<212> PRT  
<213> Arabidopsis thaliana

<400> 18  
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Ala Ile Ala Ser Ser Ser Tyr Ser Ala Glu Asn Asp Ser Ser Pro Val  
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Asp Ala Val Ile Phe Ala Gly Thr Ser Leu Val Leu Gly Thr Ala Cys  
35 40 45  
Arg Tyr Leu Phe Asn Gly Thr Arg Val Pro Tyr Thr Val Val Leu Leu  
50 55 60  
Val Ile Gly Ile Phe Leu Gly Ser Leu Glu Tyr Gly Thr Lys His Asn  
65 70 75 80  
Leu Gly Lys Leu Gly His Gly Ile Arg Ile Trp Asn Gly Ile Asn Pro  
85 90 95  
Asp Leu Leu Leu Ala Val Phe Leu Pro Val Leu Leu Phe Glu Ser Ser  
100 105 110  
Phe Ser Met Asp Val His Gln Ile Lys Arg Cys Met Gly Gln Met Val  
115 120 125  
Leu Leu Ala Gly Pro Gly Val Leu Ile Ser Thr Phe Cys Leu Gly Ala  
130 135 140  
Leu Ile Lys Leu Thr Phe Pro Tyr Asn Trp Asp Trp Lys Thr Ser Leu  
145 150 155 160  
Leu Leu Gly Gly Leu Leu Gly Ala Thr Asp Pro Val Ala Val Val Ala  
165 170 175  
Leu Leu Lys Glu Leu Gly Ala Ser Lys Lys Met Thr Thr Leu Ile Asp  
180 185 190  
Gly Glu Ser Leu Met Asn Asp Gly Val Ser Val Val Val Phe Gln Leu  
195 200 205  
Phe Phe Lys Met Val Met Gly His Asn Ser Asp Trp Gly Ser Ile Ile  
210 215 220  
Lys Phe Leu Val Gln Asn Ser Phe Gly Ala Val Gly Ile Gly Leu Ala  
225 230 235 240  
Phe Gly Ile Ala Ser Val Phe Trp Leu Lys Phe Ile Phe Asn Asp Thr  
245 250 255  
Val Ala Gln Ile Thr Val Thr Leu Ser Ala Ser Tyr Phe Ala Tyr Tyr  
260 265 270  
Thr Ala Gln Glu Trp Ala Gly Val Ser Gly Ile Leu Thr Val Met Ile  
275 280 285  
Leu Gly Met Phe Phe Ala Ala Phe Ala Arg Thr Ala Phe Lys Gly Asp  
290 295 300  
Ser His Gln Ser Leu His His Phe Trp Tyr Phe Thr Thr Gln Glu Met  
305 310 315 320  
Ala Ala Tyr Ile Ala Asn Thr Leu Val Phe Met Leu Ser Gly Val Ile  
325 330 335  
Ile Ala Glu Ser Val Leu Ser Gly Gln Thr Ile Ser Tyr Lys Ala Ile  
340 345 350  
Lys Trp Lys Phe Ile Ser Gln Phe Arg Tyr Gly Asn Lys Ala Val Leu  
355 360 365  
Gln Phe Leu Phe Leu Thr Gly Gly Ile Val Phe Leu Thr Leu Val Val

370		375		380
Asn Gly Ser Thr Thr	Gln Leu Leu Leu His	Leu Leu Arg Met Asp Thr		
385	390	395	400	
Leu Thr Ala Thr	Lys Lys Arg Ile Leu Glu Tyr Thr	Lys Phe Glu Met		
	405	410	415	
Met Lys Thr Ala	Leu Lys Ala Phe Glu Asn Leu Gly Asp Asp Glu Glu			
	420	425	430	
Leu Gly Ser Ala	Asp Trp Pro Thr Val Ile Arg His Ile Ser Ser Leu			
	435	440	445	
Lys Asp Leu Glu Gly	Arg Gln Val Asn Pro His Asp Gly Tyr Glu Ala			
	450	455	460	
Gly Ser Leu Asp Pro Thr	Asn Ile Met Asp Ile Arg Val Gln Ala Ala			
465	470	475	480	
Tyr Trp Glu Met Leu	Asp Asp Gly Arg Ile Thr Gln Cys Thr Ala Asn			
	485	490	495	
Val Leu Met Gln Ser Val	Asp Glu Ala Leu Asp Leu Val Ser Thr Ser			
	500	505	510	
Ser Leu Ser Asp Trp Arg Gly	Leu Glu Pro Arg Val His Phe Pro Asn			
	515	520	525	
Tyr Tyr Lys Phe Leu Gln Ser	Lys Ile Ile Pro His Lys Leu Val Thr			
	530	535	540	
His Leu Ile Val Glu Arg Leu Glu Ser Ala Cys Tyr Ile Ser Ser Ala				
545	550	555	560	
Phe Leu Arg Ala His Arg Ile Ala Arg Gln Leu His Ile Phe Leu				
	565	570	575	
Gly Asn Ser Asn Ile Ala Ser Thr Val Ile Asn Glu Ser Glu Val Glu				
	580	585	590	
Gly Glu Glu Ala Lys Gln Phe Leu Glu Asp Val Arg Asp Ser Phe Pro				
	595	600	605	
Gln Val Leu Ser Val Leu Lys Thr Arg Gln Val Thr His Tyr Val Leu				
	610	615	620	
Asn His Leu Asn Gly Tyr Ile Lys Asn Leu Glu Lys Val Gly Leu Leu				
625	630	635	640	
Glu Gly Lys Glu Val Ser His Leu His Asp Val Val Gln Ser Asp Leu				
	645	650	655	
Lys Lys Leu Leu Arg His Pro Pro Ser Leu Lys Leu Pro Asn Val Asp				
	660	665	670	
Asp Leu Ile Thr Ser Asn Pro Leu Lys Asp Arg Ser Ser Phe Arg				
	675	680	685	
Ser Leu Ala Ile Gly Glu Thr Asp Ala				
690	695			

<210> 19

<211> 697

<212> PRT

<213> Arabidopsis thaliana

<400> 19

Met Thr Ser Ile Ile Gly Ala Ala Leu Pro Tyr Lys Ser Pro Glu Lys	
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Ala Ile Ala Ser Ser Ser Tyr Ser Ala Glu Asn Asp Ser Ser Pro Val	
	20
Asp Ala Val Ile Phe Ala Gly Thr Ser Leu Val Leu Gly Thr Ala Cys	
	35
Arg Tyr Leu Phe Asn Gly Thr Arg Val Pro Tyr Thr Val Val Leu Leu	
	50
	55
	60

Val	Ile	Gly	Ile	Phe	Leu	Gly	Ser	Leu	Glu	Tyr	Gly	Thr	Lys	His	Asn
65					70					75					80
Leu	Gly	Lys	Leu	Gly	His	Gly	Ile	Arg	Ile	Trp	Asn	Gly	Ile	Asn	Pro
				85					90					95	
Asp	Leu	Leu	Leu	Ala	Val	Phe	Leu	Pro	Val	Leu	Leu	Phe	Glu	Ser	Ser
			100					105					110		
Phe	Ser	Met	Asp	Val	His	Gln	Ile	Lys	Arg	Cys	Met	Gly	Gln	Met	Val
		115					120					125			
Leu	Leu	Ala	Gly	Pro	Gly	Val	Leu	Ile	Ser	Thr	Phe	Cys	Leu	Gly	Ala
	130					135					140				
Leu	Ile	Lys	Leu	Thr	Phe	Pro	Tyr	Asn	Trp	Asp	Trp	Lys	Thr	Ser	Leu
145					150					155					160
Leu	Leu	Gly	Gly	Leu	Leu	Gly	Ala	Thr	Asp	Pro	Val	Ala	Val	Val	Ala
				165					170					175	
Leu	Leu	Lys	Glu	Leu	Gly	Ala	Ser	Lys	Lys	Met	Thr	Thr	Leu	Ile	Asp
		180						185					190		
Gly	Glu	Ser	Leu	Met	Asn	Asp	Gly	Val	Ser	Val	Val	Val	Phe	Gln	Leu
		195					200					205			
Phe	Phe	Lys	Met	Val	Met	Gly	His	Asn	Ser	Asp	Trp	Gly	Ser	Ile	Ile
	210					215					220				
Lys	Phe	Leu	Val	Gln	Asn	Ser	Phe	Gly	Ala	Val	Gly	Ile	Gly	Leu	Ala
225				230						235					240
Phe	Gly	Ile	Ala	Ser	Val	Phe	Trp	Leu	Lys	Phe	Ile	Phe	Asn	Asp	Thr
				245					250					255	
Val	Ala	Gln	Ile	Thr	Val	Thr	Leu	Ser	Ala	Ser	Tyr	Phe	Ala	Tyr	Tyr
			260					265					270		
Thr	Ala	Gln	Glu	Trp	Ala	Gly	Val	Ser	Gly	Ile	Leu	Thr	Val	Met	Ile
		275					280					285			
Leu	Gly	Met	Phe	Phe	Ala	Ala	Phe	Ala	Arg	Thr	Ala	Phe	Lys	Gly	Asp
	290				295						300				
Ser	His	Gln	Ser	Leu	His	His	Phe	Trp	Tyr	Phe	Thr	Thr	Gln	Glu	Met
305				310						315					320
Ala	Ala	Tyr	Ile	Ala	Asn	Thr	Leu	Val	Phe	Met	Leu	Ser	Gly	Val	Ile
				325					330					335	
Ile	Ala	Glu	Ser	Val	Leu	Ser	Gly	Gln	Thr	Ile	Ser	Tyr	Lys	Ala	Ile
		340						345					350		
Lys	Trp	Lys	Phe	Ile	Ser	Gln	Phe	Arg	Tyr	Gly	Asn	Lys	Ala	Val	Leu
	355					360						365			
Gln	Phe	Leu	Phe	Leu	Thr	Gly	Gly	Ile	Val	Phe	Leu	Thr	Leu	Val	Val
	370					375					380				
Asn	Gly	Ser	Thr	Thr	Gln	Leu	Leu	Leu	His	Leu	Leu	Arg	Met	Asp	Thr
385					390					395					400
Leu	Thr	Ala	Thr	Lys	Lys	Arg	Ile	Leu	Glu	Tyr	Thr	Lys	Phe	Glu	Met
			405						410					415	
Met	Lys	Thr	Ala	Leu	Lys	Ala	Phe	Glu	Asn	Leu	Gly	Asp	Asp	Glu	Glu
		420						425					430		
Leu	Gly	Ser	Ala	Asp	Trp	Pro	Thr	Val	Ile	Arg	His	Ile	Ser	Ser	Leu
		435					440					445			
Lys	Asp	Leu	Glu	Gly	Arg	Gln	Val	Asn	Pro	His	Asp	Gly	Tyr	Glu	Ala
	450					455					460				
Gly	Ser	Leu	Asp	Pro	Thr	Asn	Ile	Met	Asp	Ile	Arg	Val	Gln	Ala	Ala
465					470					475					480
Tyr	Trp	Glu	Met	Leu	Asp	Asp	Gly	Arg	Ile	Thr	Gln	Cys	Thr	Ala	Asn
			485						490					495	
Val	Leu	Met	Gln	Ser	Val	Asp	Glu	Ala	Leu	Asp	Leu	Val	Ser	Thr	Ser
			500					505					510		
Ser	Leu	Ser	Asp	Trp	Arg	Gly	Leu	Glu	Pro	Arg	Val	His	Phe	Pro	Asn

	515		520		525
Tyr Tyr Lys Phe Leu Gln Ser Lys Ile Ile Pro His Lys Leu Val Thr					
530		535		540	
His Leu Ile Val Glu Arg Leu Glu Ser Ala Cys Tyr Ile Ser Ser Ala					
545		550		555	560
Phe Leu Arg Ala His Arg Ile Ala Arg Gln Gln Leu His Ile Phe Leu					
	565		570		575
Gly Asn Ser Asn Ile Ala Ser Thr Val Ile Asn Glu Ser Glu Val Glu					
	580		585		590
Gly Glu Glu Ala Lys Gln Phe Leu Glu Asp Val Arg Asp Ser Phe Pro					
	595		600		605
Gln Val Leu Ser Val Leu Lys Thr Arg Gln Val Thr His Tyr Val Leu					
610		615		620	
Asn His Leu Asn Gly Tyr Ile Lys Asn Leu Glu Lys Val Gly Leu Leu					
625		630		635	640
Glu Gly Lys Glu Val Ser His Leu His Asp Val Val Gln Ser Asp Leu					
	645		650		655
Lys Lys Leu Leu Arg His Pro Pro Ser Leu Lys Leu Pro Asn Val Asp					
	660		665		670
Asp Leu Ile Thr Ser Asn Pro Leu Leu Lys Asp Arg Ser Ser Phe Arg					
	675		680		685
Ser Leu Ala Ile Gly Glu Thr Asp Ala					
690		695			

<210> 20

<211> 534

<212> PRT

<213> Lycopersicon esculentum

<400> 20

Met Gly Leu Asp Ala Val Ala Arg Leu Gly Val Ser Ile Leu Ser Asp					
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Gly Asp Gln Val Ser Val Asp Ser Ile Thr Leu Phe Val Ala Leu Leu					
	20		25		30
Cys Gly Cys Ile Val Ile Gly His Leu Leu Glu Glu Ser Arg Trp Ile					
	35		40		45
Asn Asp Ser Ile Thr Thr Leu Val Ile Gly Leu Ser Thr Gly Gly Ile					
	50		55		60
Ile Leu Leu Thr Thr Lys Gly Lys Ser Ser His Leu Leu Glu Phe Asp					
65		70		75	80
Glu Gln Leu Phe Phe Ile Tyr Val Leu Pro Pro Ile Ile Phe Asn Ala					
	85		90		95
Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Val Thr Ile					
	100		105		110
Met Leu Phe Gly Ala Val Gly Thr Leu Ile Ser Phe Ser Ile Ile Ser					
	115		120		125
Phe Gly Ala Lys Glu Leu Leu Gly Lys Leu Asp Ile Gly Phe Leu Glu					
	130		135		140
Leu Arg Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp Ser					
145		150		155	160
Val Cys Thr Leu Gln Ala Leu Asn Gln Asp Glu Thr Pro Arg Leu Tyr					
	165		170		175
Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val					
	180		185		190
Leu Phe Asn Ala Ile Gln Lys Leu Asp Leu Ser His Ile Asn Ser Arg					
195		200		205	

Ala Ala Leu Val Phe Thr Gly Asn Phe Leu Tyr Leu Phe Leu Ala Ser  
 210 215 220  
 Thr Phe Leu Gly Val Leu Ile Gly Leu Leu Ser Ala Tyr Leu Ile Lys  
 225 230 235 240  
 Lys Ile Tyr Leu Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met  
 245 250 255  
 Ile Leu Met Ala Tyr Leu Ser Tyr Val Met Ala Glu Leu Phe Asp Leu  
 260 265 270  
 Ser Gly Ile Leu Thr Val Phe Ile Cys Gly Ile Val Met Ser His Tyr  
 275 280 285  
 Thr Trp His Asn Val Thr Phe Asn Ser Lys Val Thr Thr Arg His Ala  
 290 295 300  
 Phe Ala Thr Leu Ser Phe Ile Ala Glu Ile Phe Ile Phe Leu Tyr Val  
 305 310 315 320  
 Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Arg Phe Val Lys Asp Ser  
 325 330 335  
 Pro Gly Lys Ser Val Gly Val Ser Ala Ala Leu Leu Gly Leu Val Leu  
 340 345 350  
 Val Gly Arg Ala Cys Phe Val Phe Pro Leu Ser Leu Phe Ser Asn Cys  
 355 360 365  
 Leu Lys Arg Ser Glu His Asp Lys Phe Gly Leu Lys Leu Gln Val Thr  
 370 375 380  
 Ile Trp Trp Ala Gly Leu Met Arg Gly Ser Val Ser Met Ala Leu Ala  
 385 390 395 400  
 Tyr Asn Gln Phe Thr Arg Phe Gly His Thr Gln Gln Pro Gly Asn Ala  
 405 410 415  
 Val Met Ile Thr Ser Thr Ile Thr Ile Val Leu Phe Ser Thr Val Val  
 420 425 430  
 Phe Gly Leu Ile Thr Lys Pro Leu Val Arg Phe Leu Leu Pro Ser Ser  
 435 440 445  
 Gln Gly Phe Asn Asn Leu Ile Ser Ser Glu Gln Ser Phe Ala Arg Pro  
 450 455 460  
 Leu Leu Thr Asn Glu Gln Glu Leu Glu Leu Glu Met Gly Asn Val Asp  
 465 470 475 480  
 Pro Val Arg Pro Ser Gly Leu Ser Ile Leu Leu Lys Glu Pro Ser Tyr  
 485 490 495  
 Thr Ile His Asn His Trp Arg Arg Phe Asp Asp Ala Phe Met Arg Pro  
 500 505 510  
 Leu Phe Gly Arg Gly Phe Val Pro Asp Ala Pro Glu Leu Ser Lys  
 515 520 525  
 Gly Gly Cys Asp Gln Tyr  
 530

<210> 21  
 <211> 531  
 <212> PRT  
 <213> Lycopersicon esculentum

<400> 21  
 Met Glu Asp His Leu Gln Ile Ser Pro Ala Gly Ala Lys Ala Ile Pro  
 1 5 10 15  
 Gly Lys Glu Gln Gln Ala Ala Gly Tyr Gly Ile Leu Leu Gln Ile Met  
 20 25 30  
 Met Leu Val Leu Ser Phe Val Ile Gly His Val Leu Arg Arg Arg His  
 35 40 45  
 Phe Tyr Tyr Ile Pro Glu Ala Ser Ala Ser Leu Leu Ile Gly Leu Ile



Glu Asp Glu Asp Glu Pro Ile Met His Ser Ser Arg Arg Ala Gly Tyr  
 515 520 525  
 Asp Gly His  
 530

<210> 22  
 <211> 535  
 <212> PRT  
 <213> Oryza sativa

<400> 22  
 Met Gly Met Glu Val Ala Ala Ala Arg Leu Gly Ala Leu Tyr Thr Thr  
 1 5 10 15  
 Ser Asp Tyr Ala Ser Val Val Ser Ile Asn Leu Phe Val Ala Leu Leu  
 20 25 30  
 Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg Trp Val  
 35 40 45  
 Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr Gly Val Val  
 50 55 60  
 Ile Leu Leu Met Thr Lys Gly Lys Ser Ser His Leu Phe Val Phe Ser  
 65 70 75 80  
 Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala  
 85 90 95  
 Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Met Thr Ile  
 100 105 110  
 Thr Leu Phe Gly Ala Val Gly Thr Met Ile Ser Phe Phe Thr Ile Ser  
 115 120 125  
 Ile Ala Ala Ile Ala Ile Phe Ser Arg Met Asn Ile Gly Thr Leu Asp  
 130 135 140  
 Val Gly Asp Phe Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp Ser  
 145 150 155 160  
 Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Phe Leu Tyr  
 165 170 175  
 Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Ile Val  
 180 185 190  
 Leu Phe Asn Ala Leu Gln Asn Phe Asp Leu Val His Ile Asp Ala Ala  
 195 200 205  
 Val Val Leu Lys Phe Leu Gly Asn Phe Phe Tyr Leu Phe Leu Ser Ser  
 210 215 220  
 Thr Phe Leu Gly Val Phe Ala Gly Leu Leu Ser Ala Tyr Ile Ile Lys  
 225 230 235 240  
 Lys Leu Tyr Ile Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met  
 245 250 255  
 Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Leu Asp Leu  
 260 265 270  
 Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His Tyr  
 275 280 285  
 Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His Ala  
 290 295 300  
 Phe Ala Thr Leu Ser Phe Ile Ala Glu Thr Phe Leu Phe Leu Tyr Val  
 305 310 315 320  
 Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Glu Phe Ala Ser Asp Arg  
 325 330 335  
 Pro Gly Lys Ser Ile Gly Ile Ser Ser Ile Leu Leu Gly Leu Val Leu  
 340 345 350  
 Ile Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn Leu





Gly	Lys	Ala	Leu	Gln	Leu	Ile	Gly	Asn	Phe	Leu	Tyr	Leu	Phe	Ala	Ser	210	215	220
Ser	Thr	Phe	Leu	Gly	Val	Ala	Val	Gly	Leu	Leu	Ser	Ala	Phe	Ile	Ile	225	230	235
Lys	Lys	Leu	Tyr	Phe	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Val	Ala	Ile	245	250	255
Met	Ile	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	Ala	Glu	Leu	Phe	Tyr	260	265	270
Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Cys	Gly	Ile	Val	Met	Ser	His		275	280	285
Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Val	Thr	Thr	Lys	His	290	295	300
Thr	Phe	Ala	Thr	Leu	Ser	Phe	Ile	Ala	Glu	Ile	Phe	Ile	Phe	Leu	Tyr	305	310	315
Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	Lys	Phe	Val	Ser	Asp	325	330	335
Ser	Pro	Gly	Thr	Ser	Ile	Lys	Val	Ser	Ser	Ile	Leu	Leu	Gly	Leu	Val	340	345	350
Leu	Val	Gly	Arg	Gly	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser	Asn	355	360	365
Leu	Thr	Lys	Lys	Asn	Pro	Glu	Asp	Lys	Ile	Ser	Phe	Asn	Gln	Gln	Val	370	375	380
Thr	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Met	Ala	Leu	385	390	395
Ala	Tyr	Asn	Gln	Phe	Thr	Arg	Gly	Gly	His	Thr	Gln	Leu	Arg	Ala	Asn	405	410	415
Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Thr	Val	Val	Leu	Phe	Ser	Thr	Val	420	425	430
Val	Phe	Gly	Leu	Met	Thr	Lys	Pro	Leu	Ile	Leu	Leu	Leu	Leu	Pro	Ser	435	440	445
Gln	Lys	His	Leu	Ile	Arg	Met	Ile	Ser	Ser	Glu	Pro	Met	Thr	Pro	Lys	450	455	460
Ser	Phe	Ile	Val	Pro	Leu	Leu	Asp	Ser	Thr	Gln	Asp	Ser	Glu	Ala	Asp	465	470	475
Leu	Gly	Arg	His	Val	Pro	Arg	Pro	His	Ser	Leu	Arg	Met	Leu	Leu	Ser	485	490	495
Thr	Pro	Ser	His	Thr	Val	His	Tyr	Tyr	Trp	Arg	Lys	Phe	Asp	Asn	Ala	500	505	510
Phe	Met	Arg	Pro	Val	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	515	520	525
Gly	Ser	Pro	Thr	Glu	Pro	Val	Glu	Pro	Thr	Glu	Pro	Arg	Pro	Ala	Glu	530	535	540
Ser	Arg	Pro	Thr	Glu	Pro	Thr	Asp	Glu								545	550	

<210> 24  
 <211> 542  
 <212> PRT  
 <213> Citrus x paradisi

<400> 24  
 Met Asp Gln Ala Ile Ser Ser Val Val Arg Lys Leu Gln Met Val Asn  
 1 5 10 15  
 Thr Ser Asp His Asn Ser Val Val Ser Ile Asn Ile Phe Val Ala Leu  
 20 25 30  
 Pro Cys Ala Ser Ile Val Ile Gly His Leu Leu Glu Glu Ser Arg Trp

	35					40				45					
Met	Asn	Glu	Ser	Ile	Thr	Ala	Leu	Leu	Ile	Gly	Val	Cys	Ala	Gly	Val
	50					55					60				
Ile	Ile	Leu	Leu	Thr	Thr	Gly	Gly	Lys	Ser	Ser	His	Leu	Phe	Val	Phe
65					70					75				80	
Ser	Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Val	Leu	Pro	Pro	Ile	Ile	Phe	Asn
				85					90					95	
Ala	Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	Ile	Thr
			100					105					110		
Ile	Met	Leu	Phe	Gly	Ala	Ile	Gly	Thr	Leu	Val	Ser	Cys	Thr	Ile	Ile
	115						120					125			
Ser	Leu	Gly	Val	Ile	Gln	Phe	Phe	Lys	Lys	Leu	Asp	Ile	Gly	Thr	Leu
	130					135					140				
Asp	Ile	Gly	Asp	Tyr	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ala	Ala	Thr	Asp
145					150					155				160	
Ser	Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Asp	Asp	Thr	Pro	Leu	Leu
				165					170					175	
Tyr	Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser	Val
			180					185					190		
Val	Leu	Phe	Asn	Ala	Ile	Gln	Ser	Phe	Asp	Leu	Thr	His	Ile	Asn	Thr
	195						200					205			
Arg	Ser	Ala	Phe	Gln	Phe	Ile	Gly	Asn	Phe	Leu	Tyr	Leu	Phe	Phe	Thr
	210					215					220				
Ser	Thr	Leu	Leu	Gly	Val	Ile	Gly	Gly	Leu	Leu	Ser	Ala	Tyr	Val	Ile
225					230					235				240	
Lys	Lys	Leu	Tyr	Phe	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Val	Ala	Ile
				245					250					255	
Met	Val	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	Ala	Glu	Leu	Phe	Tyr
			260					265				270			
Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Cys	Gly	Ile	Val	Met	Ser	His
	275						280					285			
Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Val	Thr	Thr	Lys	His
	290					295					300				
Thr	Phe	Ala	Thr	Leu	Ser	Phe	Val	Ala	Glu	Ile	Phe	Thr	Phe	Leu	Tyr
305					310					315				320	
Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	Arg	Phe	Val	Lys	Gly
				325					330					335	
Ser	Pro	Gly	Thr	Ser	Val	Ala	Ala	Ser	Ala	Met	Leu	Met	Gly	Leu	Ile
			340					345					350		
Met	Ala	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Thr	Asn
	355					360						365			
Leu	Ala	Lys	Lys	Ser	Pro	Thr	Glu	Lys	Ile	Ser	Ile	Lys	Gln	Gln	Val
	370					375					380				
Ile	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Met	Ala	Leu
385					390					395				400	
Ala	Tyr	Asn	Gln	Phe	Thr	Arg	Ser	Gly	His	Thr	Gln	Leu	Arg	Glu	Asn
				405					410					415	
Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Thr	Val	Val	Leu	Phe	Ser	Thr	Val
				420				425					430		
Val	Phe	Gly	Leu	Met	Thr	Glu	Pro	Leu	Ile	Arg	Leu	Leu	Leu	Pro	His
	435						440					445			
Pro	Lys	His	Thr	Thr	Asn	His	Ile	Leu	Ser	Asp	Pro	Ser	Thr	Pro	Lys
	450					455					460				
Ser	Leu	Ser	Gln	Pro	Leu	Glu	Glu	Gly	Gln	Gln	Asp	Ser	Tyr	Ala	
465					470				475					480	
Asp	Leu	Val	Gly	Pro	Thr	Val	Pro	Arg	Pro	Gly	Ser	Leu	Arg	Ala	Leu
				485					490					495	

Leu Thr Thr Pro Thr His Thr Val His Tyr Tyr Trp Arg Lys Phe Asp  
                   500                  505                  510  
 Asp Ala Phe Met Arg Pro Val Phe Gly Gly Arg Gly Phe Ala Pro Phe  
                   515                  520                  525  
 Val Pro Gly Ser Pro Thr Glu Arg Ser Val Arg Gly Gly Gln  
                   530                  535                  540

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 <212> PRT  
 <213> Triticum aestivum

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 Val Ser Asp His Asp Ser Ile Val Ala Ile Asn Ile Phe Ile Ala Leu  
                   20                  25                  30  
 Leu Cys Gly Cys Ile Val Phe Gly His Leu Leu Glu Gly Asn Arg Trp  
                   35                  40                  45  
 Val Asn Glu Ser Thr Thr Ala Leu Val Leu Gly Leu Ile Thr Gly Gly  
   50                  55                  60  
 Val Ile Leu Ile Cys Thr Lys Gly Val Asn Ser Arg Ile Leu Ile Phe  
  65                  70                  75                  80  
 Ser Glu Asp Ile Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn  
                   85                  90                  95  
 Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ala Thr  
                   100                  105                  110  
 Ile Ile Leu Phe Gly Ala Ala Gly Thr Leu Ile Ser Phe Val Ile Ile  
                   115                  120                  125  
 Thr Phe Gly Ala Met Gly Leu Phe Ser Lys Leu Asp Val Gly Pro Leu  
  130                  135                  140  
 Glu Leu Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp  
  145                  150                  155                  160  
 Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Ala Pro Leu Leu  
                   165                  170                  175  
 Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val  
                   180                  185                  190  
 Val Leu Phe Asn Ala Ile Gln Asn Ile Asp Ile Asn His Phe Asp Val  
  195                  200                  205  
 Phe Val Leu Leu Gln Phe Ile Gly Lys Phe Leu Tyr Leu Phe Phe Thr  
  210                  215                  220  
 Ser Thr Val Leu Gly Val Ala Ala Gly Leu Leu Ser Ala Tyr Ile Ile  
  225                  230                  235                  240  
 Lys Lys Leu Cys Phe Ala Arg His Ser Thr Asp Arg Glu Val Ala Ile  
                   245                  250                  255  
 Met Ile Leu Met Ala Tyr Leu Ser Tyr Met Leu Ser Met Leu Leu Asp  
                   260                  265                  270  
 Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His  
                   275                  280                  285  
 Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His  
  290                  295                  300  
 Thr Phe Ala Thr Leu Ser Phe Ile Ala Glu Ile Phe Leu Phe Leu Tyr  
  305                  310                  315                  320  
 Val Gly Met Asp Ala Leu Asp Ile Asp Lys Trp Lys Leu Ala Ser Ser  
                   325                  330                  335  
 Ser Pro Lys Lys Pro Ile Ala Leu Ser Ala Val Ile Leu Gly Leu Val

				340					345				350				
Met	Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser	Asn		
		355						360				365					
Leu	Ser	Lys	Lys	Glu	Ser	His	Pro	Lys	Ile	Ser	Phe	Asn	Gln	Gln	Val		
		370				375					380						
Ile	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Ile	Ala	Leu		
385					390					395					400		
Ala	Tyr	Asn	Lys	Phe	Thr	Thr	Ser	Gly	His	Thr	Ala	Val	Arg	Val	Asn		
				405					410					415			
Ala	Val	Met	Ile	Thr	Ser	Thr	Ile	Ile	Val	Val	Leu	Phe	Ser	Thr	Met		
			420					425					430				
Val	Phe	Gly	Leu	Leu	Thr	Lys	Pro	Leu	Ile	Asn	Leu	Leu	Ile	Pro	Pro		
		435					440					445					
Arg	Pro	Gly	Thr	Ala	Ala	Asp	Ile	Ser	Ser	Gln	Ser	Phe	Leu	Asp	Pro		
		450				455						460					
Leu	Thr	Ala	Ser	Leu	Leu	Gly	Ser	Asp	Phe	Asp	Val	Gly	Gln	Leu	Thr		
465					470					475					480		
Pro	Gln	Thr	Asn	Leu	Gln	Tyr	Leu	Leu	Thr	Met	Pro	Thr	Arg	Ser	Val		
				485					490					495			
His	Arg	Val	Trp	Arg	Lys	Phe	Asp	Asp	Lys	Phe	Met	Arg	Pro	Met	Phe		
			500					505					510				
Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly	Ser	Pro	Ile	Glu	Arg		
		515					520					525					
Ser	Val	His	Gly	Pro	Gly	Leu	Leu	Gly	Thr	Val	Thr	Glu	Ala	Glu	Asp		
		530				535					540						
Arg	Ser																
545																	

<210> 26  
 <211> 538  
 <212> PRT  
 <213> Triticum aestivum

<400> 26																	
Met	Gly	Tyr	Gln	Val	Val	Ala	Ala	Gln	Leu	Ala	Arg	Leu	Ser	Gly	Ala		
1				5					10					15			
Leu	Gly	Thr	Ser	Asp	His	Ala	Ser	Val	Val	Ser	Ile	Thr	Leu	Phe	Val		
			20					25					30				
Ala	Leu	Leu	Cys	Ala	Cys	Ile	Val	Leu	Gly	His	Leu	Leu	Glu	Glu	Asn		
		35					40					45					
Arg	Trp	Leu	Asn	Glu	Ser	Ile	Thr	Ala	Leu	Ile	Ile	Gly	Leu	Cys	Thr		
		50				55					60						
Gly	Val	Val	Ile	Leu	Met	Thr	Thr	Lys	Gly	Lys	Ser	Ser	His	Val	Leu		
65					70					75					80		
Val	Phe	Ser	Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile		
				85					90					95			
Phe	Asn	Ala	Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe		
		100						105					110				
Met	Ala	Ile	Thr	Leu	Phe	Gly	Ala	Val	Gly	Thr	Met	Met	Ser	Phe	Phe		
		115					120					125					
Thr	Ile	Ser	Leu	Ala	Ala	Ile	Ala	Ile	Phe	Ser	Arg	Met	Asn	Ile	Gly		
		130				135					140						
Thr	Leu	Asp	Val	Ser	Asp	Phe	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ser	Ala		
145					150					155					160		
Thr	Asp	Ser	Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Asp	Glu	Thr	Pro		
				165					170					175			

Phe Leu Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr  
180 185 190  
Ser Val Val Leu Phe Asn Ala Leu Gln Asn Phe Asp Pro Asn Gln Ile  
195 200 205  
Asp Ala Ile Val Ile Leu Lys Phe Leu Gly Asn Phe Cys Tyr Leu Phe  
210 215 220  
Val Ser Ser Thr Phe Leu Gly Val Phe Thr Gly Leu Leu Ser Ala Tyr  
225 230 235 240  
Val Ile Lys Lys Leu Tyr Ile Gly Arg His Ser Thr Asp Arg Glu Val  
245 250 255  
Ala Leu Val Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu  
260 265 270  
Leu Asp Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met  
275 280 285  
Ser His Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr  
290 295 300  
Lys His Ala Phe Ala Thr Leu Ser Phe Ile Ala Glu Thr Phe Leu Phe  
305 310 315 320  
Leu Tyr Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Lys Phe Ala  
325 330 335  
Ser Asp Ser Pro Gly Lys Ser Ile Gly Ile Ser Ser Ile Leu Leu Gly  
340 345 350  
Leu Val Leu Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu  
355 360 365  
Ser Asn Leu Thr Lys Lys Thr Glu Leu Glu Lys Ile Ser Trp Arg Gln  
370 375 380  
Gln Ile Val Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile  
385 390 395 400  
Ala Leu Ala Tyr Asn Lys Phe Thr Arg Ser Gly His Thr Gln Leu His  
405 410 415  
Gly Asn Ala Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser  
420 425 430  
Thr Met Leu Phe Gly Ile Leu Thr Lys Pro Leu Ile Arg Phe Leu Leu  
435 440 445  
Pro Ala Ser Ser Asn Gly Ala Ala Ser Asp Pro Ala Ser Pro Lys Ser  
450 455 460  
Leu His Ser Pro Leu Leu Thr Ser Gln Leu Gly Ser Asp Leu Glu Ala  
465 470 475 480  
Pro Leu Pro Ile Val Arg Pro Ser Ser Leu Arg Met Leu Ile Thr Lys  
485 490 495  
Pro Thr His Thr Ile His Tyr Tyr Trp Arg Lys Phe Asp Asp Ala Leu  
500 505 510  
Met Arg Pro Met Phe Gly Gly Arg Gly Phe Val Pro Tyr Ser Pro Gly  
515 520 525  
Ser Pro Thr Asp Pro Asn Val Leu Val Glu  
530 535

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<212> PRT  
<213> Triticum aestivum

<400> 27  
Met Gly Leu Asp Leu Gly Ala Leu Ala Leu Lys Tyr Thr Gly Leu Ala  
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Val Ser Asp His Asp Ser Ile Val Ala Ile Asn Ile Phe Ile Ala Leu



Pro Gln Thr Asn Leu Gln Tyr Leu Leu Thr Met Pro Thr Arg Ser Ala  
                                   485                                  490                                  495  
 His Arg Val Trp Arg Lys Phe Asp Asp Lys Phe Met Arg Pro Met Phe  
                                   500                                  505                                  510  
 Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser Pro Ile Glu Arg  
                                   515                                  520                                  525  
 Ser Val His Gly Pro Gly Leu Leu Gly Thr Val Thr Glu Ala Glu Asp  
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 Arg Ser  
 545

<210> 28  
 <211> 540  
 <212> PRT  
 <213> Zea mays

<400> 28  
 Met Gly Leu Gly Val Val Ala Glu Leu Val Arg Leu Gly Val Leu Ser  
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 Ser Thr Ser Asp His Ala Ser Val Val Ser Ile Asn Leu Phe Val Ala  
                                   20                                  25                                  30  
 Leu Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg  
                                   35                                  40                                  45  
 Trp Val Asn Glu Ser Thr Ala Leu Ile Val Gly Leu Gly Thr Gly Thr  
                                   50                                  55                                  60  
 Val Ile Leu Met Ile Ser Arg Gly Val Val Ile His Val Leu Val Phe  
 65                                  70                                  75                                  80  
 Ser Glu Asp Leu Phe Phe Phe Tyr Leu Leu Pro Pro Ile Ile Phe Asn  
                                   85                                  90                                  95  
 Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ile Thr  
                                   100                                  105                                  110  
 Ile Thr Leu Phe Gly Ala Val Gly Thr Leu Ile Ser Phe Thr Val Ile  
                                   115                                  120                                  125  
 Ser Leu Gly Ala Leu Gly Leu Ile Ser Arg Leu Asn Ile Gly Ala Leu  
                                   130                                  135                                  140  
 Glu Leu Gly Asp Tyr Leu Ala Leu Gly Ala Ile Phe Ser Ala Thr Asp  
 145                                  150                                  155                                  160  
 Ser Val Cys Thr Leu Gln Val Leu Ser Gln Asp Glu Thr Pro Phe Leu  
                                   165                                  170                                  175  
 Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val  
                                   180                                  185                                  190  
 Val Val Phe Asn Ala Leu Gln Asn Phe Asp Ile Thr His Ile Asp Ala  
                                   195                                  200                                  205  
 Glu Val Val Phe His Leu Leu Gly Asn Phe Phe Tyr Leu Phe Leu Leu  
                                   210                                  215                                  220  
 Ser Thr Val Leu Gly Val Ala Thr Gly Leu Ile Ser Ala Leu Val Ile  
 225                                  230                                  235                                  240  
 Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu  
                                   245                                  250                                  255  
 Met Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Ala  
                                   260                                  265                                  270  
 Leu Ser Gly Ile Leu Thr Val Phe Phe Gly Cys Ile Val Met Ser His  
                                   275                                  280                                  285  
 Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Ile Thr Thr Lys His  
                                   290                                  295                                  300  
 Ala Phe Ala Thr Leu Ser Phe Leu Ala Glu Thr Phe Leu Phe Leu Tyr



305					310					315					320
Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Asp	Lys	Trp	Arg	Ser	Val	Ser	Asp
				325					330					335	
Thr	Pro	Gly	Lys	Ser	Leu	Ala	Ile	Ser	Ser	Ile	Leu	Met	Gly	Leu	Val
				340					345					350	
Met	Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser	Asn
				355					360					365	
Leu	Ala	Lys	Lys	Thr	Glu	His	Glu	Lys	Ile	Ser	Trp	Lys	Gln	Gln	Val
				370					375					380	
Val	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Met	Ala	Leu
385					390					395					400
Ala	Tyr	Lys	Lys	Phe	Thr	Arg	Ala	Gly	His	Thr	Gln	Val	Arg	Gly	Asn
				405					410					415	
Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Ile	Val	Val	Leu	Phe	Ser	Thr	Met
				420					425					430	
Val	Phe	Gly	Leu	Leu	Thr	Lys	Pro	Leu	Ile	Asn	Leu	Leu	Ile	Pro	His
				435					440					445	
Arg	Asn	Ala	Thr	Ser	Met	Leu	Ser	Asp	Asp	Ser	Ser	Pro	Lys	Ser	Leu
				450					455					460	
His	Ser	Pro	Leu	Leu	Thr	Ser	Gln	Leu	Gly	Ser	Asp	Leu	Glu	Glu	Pro
465					470					475					480
Thr	Asn	Ile	Pro	Arg	Pro	Ser	Ser	Ile	Arg	Gly	Glu	Phe	Leu	Thr	Met
				485					490					495	
Thr	Arg	Thr	Val	His	Arg	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Ala	Phe	Met
				500					505					510	
Arg	Pro	Met	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly	Ser
				515					520					525	
Pro	Thr	Glu	Arg	Asn	Pro	Pro	Asp	Leu	Ser	Lys	Ala				
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<210> 29  
 <211> 540  
 <212> PRT  
 <213> Zea mays

<400> 29															
Met	Gly	Leu	Gly	Val	Asp	Ala	Glu	Thr	Val	Arg	Leu	Gly	Val	Leu	Ser
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Ser	Thr	Ser	Asp	His	Ala	Ser	Val	Val	Ser	Asn	Asn	Phe	Phe	Val	Ala
				20					25					30	
Leu	Leu	Cys	Ala	Cys	Ile	Val	Leu	Gly	His	Leu	Leu	Glu	Glu	Asn	Arg
				35					40					45	
Met	Val	Asn	Glu	Ser	Ile	Thr	Ala	Leu	Leu	Val	Gly	Leu	Gly	Thr	Gly
				50					55					60	
Thr	Val	Ile	Leu	Met	Ile	Ser	Arg	Gly	Val	Ser	Ile	His	Val	Leu	Val
65					70					75					80
Phe	Ser	Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	Phe
				85					90					95	
Asn	Ala	Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	Ile
				100					105					110	
Thr	Ile	Ile	Leu	Phe	Gly	Ala	Ile	Gly	Thr	Leu	Ile	Ser	Phe	Val	Ile
				115					120					125	
Ile	Ser	Leu	Gly	Ala	Met	Gly	Leu	Phe	Lys	Lys	Leu	Asp	Val	Gly	Pro
				130					135					140	
Leu	Glu	Leu	Gly	Asp	Tyr	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ser	Ala	Thr
145					150					155					160

Asp	Ser	Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Asp	Glu	Thr	Pro	Leu	165	170	175
Leu	Tyr	Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser	180	185	190
Ile	Val	Val	Phe	Asn	Ala	Leu	Gln	Asn	Phe	Asp	Ile	Thr	His	Ile	Asn	195	200	205
Ala	Glu	Val	Val	Phe	His	Leu	Leu	Gly	Asn	Phe	Leu	Tyr	Leu	Phe	Leu	210	215	220
Leu	Ser	Thr	Val	Leu	Gly	Val	Ala	Thr	Gly	Leu	Ile	Ser	Ala	Leu	Val	225	230	235
Ile	Lys	Lys	Ile	Tyr	Phe	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Val	Ala	245	250	255
Leu	Met	Met	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	Ala	Glu	Leu	Phe	260	265	270
Ala	Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Gly	Cys	Ile	Val	Met	Ser	275	280	285
His	Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Ile	Thr	Thr	Lys	290	295	300
His	Ala	Phe	Ala	Thr	Leu	Ser	Phe	Leu	Ala	Glu	Thr	Phe	Ile	Phe	Leu	305	310	315
Tyr	Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	Arg	Ser	Val	Ser	325	330	335
Asp	Thr	Pro	Gly	Lys	Ser	Ile	Ala	Ile	Ser	Ser	Ile	Leu	Met	Gly	Leu	340	345	350
Val	Met	Leu	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser	355	360	365
Asn	Leu	Ala	Lys	Lys	Asn	Glu	His	Glu	Lys	Ile	Ser	Trp	Lys	Gln	Gln	370	375	380
Val	Val	Ile	Trp	Trp	Ser	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Met	Ala	385	390	395
Leu	Ala	Tyr	Asn	Lys	Phe	Thr	Arg	Ala	Gly	His	Thr	Glu	Val	Arg	Gly	405	410	415
Asn	Glu	Ile	Met	Ile	Thr	Ser	Thr	Ile	Thr	Val	Val	Leu	Phe	Ser	Thr	420	425	430
Val	Val	Phe	Gly	Leu	Leu	Thr	Lys	Pro	Leu	Ile	Arg	Leu	Leu	Met	Pro	435	440	445
His	Arg	His	Leu	Thr	Met	Leu	Ser	Asp	Asp	Ser	Thr	Pro	Lys	Ser	Leu	450	455	460
His	Ser	Pro	Leu	Leu	Thr	Ser	Gln	Leu	Gly	Ser	Ser	Ile	Glu	Glu	Pro	465	470	475
Thr	Gln	Ile	Pro	Arg	Pro	Thr	Asn	Ile	Arg	Gly	Glu	Phe	Thr	Thr	Met	485	490	495
Thr	Arg	Thr	Val	His	Arg	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Lys	Phe	Met	500	505	510
Arg	Pro	Met	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly	Ser	515	520	525
Pro	Thr	Glu	Arg	Asn	Pro	His	Asp	Leu	Ser	Lys	Pro					530	535	540

<210> 30

<211> 539

<212> PRT

<213> Zea mays

<400> 30

Met Ser Ile Gly Leu Thr Ala Glu Thr Val Thr Asn Lys Leu Ala Ser

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Ala	Glu	His	Pro	Gln	Val	Val	Pro	Asn	Ser	Val	Phe	Ile	Ala	Leu	Leu
			20					25					30		
Cys	Leu	Cys	Leu	Val	Ile	Gly	His	Leu	Leu	Glu	Glu	Asn	Arg	Trp	Val
		35					40					45			
Asn	Glu	Ser	Ile	Thr	Ala	Ile	Leu	Val	Gly	Ala	Ala	Thr	Gly	Thr	Val
	50					55					60				
Ile	Leu	Leu	Ile	Ser	Lys	Gly	Lys	Ser	Ser	His	Ile	Leu	Val	Phe	Asp
65					70					75				80	
Glu	Glu	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	Phe	Asn	Ala
				85					90					95	
Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	Ile	Thr	Ile
			100					105					110		
Ile	Leu	Phe	Gly	Ala	Ile	Gly	Thr	Leu	Ile	Ser	Phe	Val	Ile	Ile	Ser
	115						120					125			
Leu	Gly	Ala	Met	Gly	Leu	Phe	Lys	Lys	Leu	Asp	Val	Gly	Pro	Leu	Glu
	130					135				140					
Leu	Gly	Asp	Tyr	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ser	Ala	Thr	Asp	Ser
145					150					155				160	
Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Asp	Glu	Thr	Pro	Leu	Leu	Tyr
				165					170					175	
Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser	Val	Val
		180						185					190		
Leu	Phe	Asn	Ala	Val	Gln	Lys	Ile	Asp	Phe	Glu	His	Leu	Thr	Gly	Glu
	195					200					205				
Val	Ala	Leu	Gln	Val	Phe	Gly	Asn	Phe	Leu	Tyr	Leu	Phe	Ser	Thr	Ser
	210					215					220				
Thr	Val	Leu	Gly	Ile	Ala	Thr	Gly	Leu	Ile	Thr	Ala	Phe	Val	Leu	Lys
225					230					235					240
Thr	Leu	Tyr	Phe	Gly	Arg	His	Ser	Thr	Thr	Arg	Glu	Leu	Ala	Ile	Met
				245					250					255	
Val	Leu	Met	Ala	Tyr	Leu	Ser	Phe	Met	Leu	Ala	Glu	Leu	Phe	Ser	Leu
		260						265					270		
Ser	Gly	Ile	Ile	Thr	Val	Phe	Phe	Cys	Gly	Val	Leu	Met	Ser	His	Val
	275						280					285			
Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Ile	Thr	Ser	Arg	His	Val
	290					295					300				
Phe	Ala	Met	Leu	Ser	Phe	Ile	Ala	Glu	Thr	Phe	Leu	Phe	Leu	Tyr	Val
305					310					315				320	
Gly	Thr	Asp	Ala	Leu	Asp	Phe	Thr	Lys	Trp	Lys	Thr	Ser	Ser	Leu	Ser
				325					330					335	
Phe	Gly	Lys	Ser	Leu	Gly	Val	Ser	Ser	Val	Leu	Leu	Gly	Leu	Val	Leu
			340					345					350		
Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser	Asn	Leu
	355						360					365			
Ser	Lys	Lys	His	Pro	Gly	Glu	Lys	Ile	Thr	Ile	Arg	Gln	Gln	Val	Val
	370					375					380				
Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Ile	Ala	Leu	Ala
385					390					395				400	
Phe	Asn	Lys	Phe	Thr	Arg	Ala	Gly	His	Thr	Gln	Val	Arg	Gly	Asn	Ala
				405					410					415	
Ile	Met	Ile	Thr	Ser	Thr	Ile	Ile	Val	Val	Leu	Phe	Ser	Thr	Val	Val
			420					425					430		
Phe	Gly	Leu	Leu	Thr	Lys	Pro	Leu	Ile	Asn	Leu	Leu	Ile	Pro	His	Arg
	435						440					445			
Asn	Ala	Thr	Ser	Met	Leu	Ser	Asp	Asp	Ser	Ser	Pro	Lys	Ser	Leu	His
	450					455					460				

Ser Pro Leu Leu Thr Ser Gln Leu Ile Ser Ser Ile Glu Glu Pro Thr  
 465 470 475 480  
 Gln Ile Pro Arg Pro Thr Asn Ile Arg Gly Glu Phe Met Thr Met Thr  
 485 490 495  
 Arg Thr Val His Arg Tyr Trp Arg Lys Phe Asp Asp Lys Phe Met Arg  
 500 505 510  
 Pro Met Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser Pro  
 515 520 525  
 Thr Glu Arg Ser Ser Pro Asp Leu Ser Lys Ala  
 530 535

<210> 31  
 <211> 538  
 <212> PRT  
 <213> Zea mays

<400> 31  
 Met Gly Tyr Gln Val Val Ala Ala Gln Leu Lys Leu Ala Ser Ser Ala  
 1 5 10 15  
 Asp His Ala Ser Val Val Ile Ile Thr Leu Phe Val Ala Leu Leu Cys  
 20 25 30  
 Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg Trp Leu Asn  
 35 40 45  
 Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Gly Thr Gly Val Val Ile  
 50 55 60  
 Leu Leu Ile Ser Arg Gly Lys Asn Ser Arg Leu Leu Val Phe Ser Glu  
 65 70 75 80  
 Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala Gly  
 85 90 95  
 Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Met Thr Ile Thr  
 100 105 110  
 Leu Phe Gly Ala Val Gly Thr Met Ile Ser Phe Phe Thr Ile Ser Leu  
 115 120 125  
 Gly Ala Ile Ala Thr Phe Ser Arg Met Ser Ile Gly Thr Leu Asp Val  
 130 135 140  
 Gly Asp Phe Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp Ser Val  
 145 150 155 160  
 Cys Thr Leu Gln Val Leu His Gln Asp Glu Thr Pro Phe Leu Tyr Ser  
 165 170 175  
 Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val Leu  
 180 185 190  
 Phe Asn Ala Val Gln Lys Ile Gln Phe Thr His Ile Asn Ala Trp Thr  
 195 200 205  
 Ala Leu Gln Leu Ile Gly Asn Phe Leu Tyr Leu Phe Ser Thr Ser Thr  
 210 215 220  
 Leu Leu Gly Ile Gly Thr Gly Leu Ile Thr Ala Phe Val Leu Lys Lys  
 225 230 235 240  
 Leu Tyr Phe Gly Arg His Ser Thr Thr Arg Glu Leu Ala Ile Met Ile  
 245 250 255  
 Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Ser Leu Ser  
 260 265 270  
 Gly Leu Leu Thr Val Phe Phe Cys Gly Val Leu Met Ser His Val Thr  
 275 280 285  
 Trp His Asn Val Thr Glu Ser Ser Arg Thr Thr Ser Arg His Val Phe  
 290 295 300  
 Ala Thr Leu Ser Phe Ile Ser Glu Thr Phe Ile Phe Leu Tyr Val Gly

305					310					315					320
Met	Asp	Ala	Leu	Asp	Phe	Glu	Lys	Trp	Lys	Thr	Ser	Ser	Leu	Ser	Phe
				325					330					335	
Gly	Gly	Thr	Leu	Gly	Val	Ser	Gly	Val	Leu	Met	Gly	Leu	Val	Met	Leu
			340					345					350		
Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser	Asn	Leu	Ala
		355					360					365			
Lys	Lys	His	Gln	Ser	Glu	Lys	Ile	Ser	Phe	Arg	Met	Gln	Val	Val	Ile
	370					375				380					
Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Met	Ala	Leu	Ala	Leu
385					390					395					400
Asn	Lys	Phe	Thr	Arg	Ser	Gly	His	Thr	Gln	Leu	His	Gly	Asn	Ala	Ile
				405					410					415	
Met	Ile	Thr	Ser	Thr	Ile	Thr	Val	Val	Leu	Phe	Ser	Thr	Met	Val	Phe
			420					425					430		
Gly	Met	Ile	Thr	Lys	Pro	Leu	Ile	Arg	Leu	Leu	Leu	Pro	Ala	Ser	Gly
		435					440					445			
His	Pro	Arg	Glu	Leu	Ser	Glu	Pro	Ser	Ser	Pro	Lys	Ser	Phe	His	Ser
	450					455					460				
Pro	Leu	Leu	Thr	Ser	Gln	Gln	Gly	Ser	Asp	Leu	Glu	Ser	Thr	Thr	Asn
465					470					475					480
Ile	Val	Arg	Pro	Ser	Ser	Leu	Arg	Gly	Leu	Leu	Thr	Lys	Pro	Thr	His
				485					490					495	
Thr	Val	His	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Ala	Leu	Met	Arg	Pro	
			500				505					510			
Val	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly	Ser	Pro	Thr
		515				520						525			
Glu	Arg	Asn	Pro	Pro	Asp	Leu	Ser	Lys	Ala						
	530					535									

<210> 32  
 <211> 545  
 <212> PRT  
 <213> Zea mays

<400> 32															
Met	Ser	Met	Gly	Tyr	Gln	Val	Val	Ala	Ala	Gln	Leu	Lys	Val	Ala	Ser
1				5					10					15	
Ser	Ala	Asp	His	Ala	Ser	Val	Val	Ile	Ile	Thr	Leu	Phe	Val	Ala	Leu
			20					25					30		
Leu	Cys	Ala	Cys	Ile	Val	Leu	Gly	His	Leu	Leu	Glu	Glu	Asn	Arg	Trp
		35					40					45			
Leu	Asn	Glu	Ser	Ile	Thr	Ala	Leu	Ile	Ile	Gly	Leu	Cys	Thr	Gly	Gly
	50					55				60					
Val	Ile	Leu	Met	Thr	Thr	Lys	Gly	Lys	Ser	Ser	His	Val	Leu	Val	Phe
65					70				75					80	
Ser	Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	Phe	Ile
				85				90					95		
Ala	Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	Met	Thr
			100					105					110		
Ile	Thr	Leu	Phe	Gly	Ala	Val	Gly	Thr	Met	Ile	Ser	Phe	Phe	Thr	Ile
	115						120					125			
Ser	Leu	Gly	Ala	Ile	Ala	Ile	Phe	Ser	Arg	Met	Asn	Ile	Gly	Thr	Leu
	130					135					140				
Asp	Val	Gly	Asp	Phe	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ser	Ala	Thr	Asp
145					150					155					160

Ser	Val	Cys	Thr	Leu	Gln	Val	Leu	His	Gln	Asp	Glu	Thr	Pro	Phe	Leu			
				165					170					175				
Tyr	Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser	Val			
				180				185					190					
Val	Leu	Phe	Asn	Ala	Val	Gln	Lys	Ile	Gln	Ile	Thr	His	Ile	Asn	Ala			
				195			200					205						
Glu	Val	Ala	Leu	Gln	Val	Phe	Gly	Asn	Phe	Leu	Tyr	Leu	Phe	Ser	Thr			
				210			215				220							
Ser	Thr	Leu	Leu	Gly	Ile	Ala	Thr	Gly	Leu	Ile	Thr	Ser	Phe	Val	Leu			
225					230					235					240			
Lys	Lys	Leu	Tyr	Phe	Ala	Arg	His	Ser	Thr	Thr	Arg	Glu	Leu	Ala	Ile			
				245					250					255				
Met	Met	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	Ala	Glu	Leu	Phe	Ser			
				260				265					270					
Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Cys	Gly	Val	Leu	Met	Ser	His			
				275			280					285						
Val	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Ile	Thr	Ser	Arg	His			
						295					300							
Val	Phe	Ala	Met	Leu	Ser	Phe	Ile	Ala	Glu	Thr	Phe	Ile	Phe	Leu	Tyr			
305					310					315					320			
Val	Gly	Thr	Asp	Ala	Leu	Asp	Phe	Asp	Lys	Trp	Lys	Thr	Ser	Ser	Leu			
				325					330					335				
Ser	Phe	Gly	Gly	Thr	Leu	Gly	Val	Ser	Ala	Leu	Ile	Met	Ala	Leu	Val			
				340				345					350					
Leu	Leu	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Val	Leu	Thr	Asn			
				355			360					365						
Phe	Ser	Asn	Lys	His	Glu	Asn	Glu	Ser	Ile	Thr	Phe	Lys	His	Gln	Val			
						375					380							
Ile	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Ile	Ala	Leu			
385					390					395					400			
Ala	Phe	Lys	Gln	Phe	Thr	Tyr	Ser	Gly	Val	Thr	Leu	Asp	Pro	Val	Asn			
				405					410					415				
Ala	Ala	Met	Val	Thr	Asn	Thr	Thr	Ile	Val	Val	Leu	Phe	Thr	Thr	Leu			
				420				425					430					
Val	Phe	Gly	Leu	Leu	Thr	Lys	Pro	Leu	Ile	Arg	Leu	Leu	Met	Pro	His			
				435			440					445						
Arg	His	Leu	Thr	Met	Leu	Ser	Asp	Asp	Ser	Thr	Pro	Lys	Ser	Leu	His			
				450		455					460							
Ser	Pro	Leu	Leu	Thr	Ser	Gln	Leu	Gly	Ser	Asp	Leu	Glu	Glu	Pro	Thr			
465					470					475					480			
Asn	Ile	Pro	Arg	Pro	Ser	Ser	Ile	Arg	Gly	Glu	Phe	Leu	Thr	Met	Thr			
				485					490					495				
Arg	Thr	Val	His	Arg	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Ala	Phe	Met	Arg			
				500				505					510					
Pro	Met	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Val	Val	Pro	Gly	Ser	Pro			
				515			520					525						
Ile	Glu	Arg	Ser	Val	Pro	Gln	Trp	Ser	Glu	Glu	Ala	His	Asn	Lys	Glu			
				530		535					540							
Pro																		
545																		

<210> 33  
 <211> 541  
 <212> PRT  
 <213> Zea mays

Met 1	Gly	Leu	Gly	Val 5	Val	Ala	Glu	Leu	Val 10	Arg	Leu	Gly	Val 15	Leu	Ser
Ser	Thr	Ser	Asp 20	His	Ala	Ser	Val	Val 25	Ser	Ile	Asn	Leu 30	Phe	Val	Ala
Leu	Leu	Cys 35	Ala	Cys	Ile	Val	Leu 40	Gly	His	Leu	Leu 45	Glu	Glu	Asn	Arg
Trp	Val 50	Asn	Glu	Ser	Ile	Thr 55	Ala	Leu	Ile	Ile 60	Gly	Leu	Cys	Thr	Gly
Val 65	Val	Ile	Leu	Leu	Thr 70	Thr	Lys	Gly	Lys	Ser 75	Ser	His	Ile	Leu	Val 80
Phe	Ser	Glu	Asp	Leu 85	Phe	Phe	Ile	Tyr	Leu 90	Leu	Pro	Pro	Ile	Ile	Phe
Asn	Ala	Gly	Phe 100	Gln	Val	Lys	Lys	Lys 105	Gln	Phe	Phe	Arg	Asn	Phe	Met
Thr	Ile	Thr 115	Leu	Phe	Gly	Ala 120	Val	Gly	Thr	Met	Ile	Ser	Phe	Phe	Thr
Ile	Ser 130	Leu	Gly	Ala	Leu	Gly 135	Leu	Ile	Ser	Arg	Leu 140	Asn	Ile	Gly	Ala
Leu 145	Glu	Leu	Gly	Asp 150	Tyr	Leu	Ala	Leu	Gly	Ala 155	Ile	Phe	Ser	Ala	Thr 160
Asp	Ser	Val	Cys	Thr 165	Leu	Gln	Val	Leu	Ser 170	Gln	Asp	Glu	Thr	Pro	Phe
Leu	Tyr	Ser	Leu 180	Val	Phe	Gly	Glu	Gly 185	Val	Val	Asn	Asp	Ala	Thr	Ser
Val	Val 195	Val	Phe	Asn	Ala	Leu 200	Gln	Asn	Phe	Asp	Ile 205	Thr	His	Ile	Asp
Ala	Glu 210	Val	Val	Phe	His	Leu 215	Leu	Gly	Asn	Phe 220	Phe	Tyr	Leu	Phe	Leu
Leu 225	Ser	Thr	Val	Leu	Gly 230	Val	Ala	Thr	Gly	Leu 235	Ile	Ser	Ala	Leu	Val 240
Ile	Lys	Lys	Leu	Tyr 245	Phe	Gly	Arg	His	Ser 250	Thr	Asp	Arg	Glu	Val	Ala 255
Leu	Met	Met	Leu 260	Met	Ala	Tyr	Leu	Ser 265	Tyr	Met	Leu	Ala	Glu	Leu	Phe
Ala	Leu	Ser 275	Gly	Ile	Leu	Thr 280	Val	Phe	Phe	Gly	Cys	Ile	Val	Met	Ser
His	Tyr 290	Thr	Trp	His	Asn 295	Val	Thr	Glu	Ser	Ser	Arg 300	Ile	Thr	Thr	Lys
His 305	Ala	Phe	Ala	Thr 310	Leu	Ser	Phe	Leu	Ala	Glu 315	Thr	Phe	Leu	Phe	Leu 320
Tyr	Val	Gly	Met	Asp 325	Ala	Leu	Asp	Ile	Asp 330	Lys	Trp	Arg	Ser	Val	Ser 335
Asp	Thr	Pro	Gly 340	Lys	Ser	Leu	Ala	Ile 345	Ser	Ser	Ile	Leu	Met	Gly	Leu 350
Val	Met 355	Val	Gly	Arg	Ala	Ala 360	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser
Asn	Leu 370	Ala	Lys	Lys	Thr 375	Glu	His	Glu	Lys	Ile 380	Ser	Trp	Lys	Gln	Gln
Val 385	Val	Ile	Trp	Trp 390	Ala	Gly	Leu	Met	Arg	Gly 395	Ala	Val	Ser	Met	Ala 400
Leu	Ala	Tyr	Lys	Lys 405	Phe	Thr	Arg	Ala	Gly 410	His	Thr	Gln	Val	Arg	Gly 415
Asn	Ala	Ile	Met 420	Ile	Thr	Ser	Thr	Ile 425	Ile	Val	Val	Leu	Phe	Ser	Thr
Met	Val	Phe 435	Gly	Leu	Leu	Thr 440	Lys	Pro	Leu	Ile	Asn	Leu	Ile	Pro	

His	Arg	Asn	Ala	Thr	Ser	Met	Leu	Ser	Asp	Asp	Ser	Ser	Pro	Lys	Ser
450						455					460				
Leu	His	Ser	Pro	Leu	Leu	Thr	Ser	Gln	Leu	Gly	Ser	Asp	Leu	Glu	Glu
465						470				475					480
Pro	Thr	Asn	Ile	Pro	Arg	Pro	Ser	Ser	Ile	Arg	Gly	Glu	Phe	Leu	Thr
				485					490					495	
Met	Thr	Arg	Thr	Val	His	Arg	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Ala	Phe
			500					505					510		
Met	Arg	Pro	Met	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly
		515					520					525			
Ser	Pro	Thr	Glu	Arg	Asn	Pro	Pro	Asp	Leu	Ser	Lys	Ala			
	530					535						540			

<210> 34

<211> 543

<212> PRT

<213> Gossypium hirsutum

<400> 34

Met	Val	Ala	Pro	Gln	Leu	Ala	Ala	Val	Phe	Thr	Lys	Leu	Gln	Thr	Leu
1				5					10					15	
Ser	Thr	Ser	Asp	His	Ala	Ser	Val	Val	Ser	Met	Asn	Ile	Phe	Val	Ala
			20					25					30		
Leu	Leu	Cys	Ala	Cys	Ile	Val	Ile	Gly	His	Leu	Leu	Glu	Glu	Asn	Arg
		35					40					45			
Trp	Met	Asn	Glu	Ser	Ile	Thr	Ala	Leu	Ile	Ile	Gly	Val	Phe	Thr	Gly
						55					60				
Val	Ile	Ile	Leu	Leu	Thr	Ser	Gly	Gly	Lys	Ser	Ser	His	Leu	Leu	Val
65					70				75						80
Phe	Ser	Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	Phe
				85				90						95	
Asn	Ala	Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	Ile
			100					105					110		
Thr	Ile	Met	Leu	Phe	Gly	Ala	Val	Gly	Thr	Leu	Ile	Ser	Cys	Thr	Ile
		115					120					125			
Ile	Ser	Leu	Gly	Val	Ile	Asn	Phe	Phe	Lys	Glu	Met	Asp	Ile	Gly	Ser
		130				135					140				
Leu	Asp	Ile	Gly	Asp	Phe	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ala	Ala	Thr
145					150					155					160
Asp	Ser	Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Asp	Glu	Thr	Pro	Leu
				165					170					175	
Leu	Tyr	Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser
			180					185					190		
Val	Val	Leu	Phe	Asn	Ala	Ile	Gln	Ser	Phe	Asp	Leu	Val	Asn	Thr	Ser
		195					200					205			
Pro	Arg	Ile	Leu	Leu	Glu	Phe	Ile	Gly	Ser	Phe	Leu	Tyr	Leu	Phe	Leu
		210				215						220			
Ala	Ser	Thr	Met	Leu	Gly	Val	Ile	Val	Gly	Leu	Val	Ser	Ala	Tyr	Ile
225					230					235					240
Ile	Lys	Lys	Leu	Tyr	Phe	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Phe	Ala
				245					250					255	
Leu	Met	Met	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Ile	Met	Ala	Glu	Leu	Phe
			260					265					270		
Tyr	Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Cys	Gly	Ile	Val	Met	Ser
		275					280					285			
His	Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Val	Thr	Thr	Lys



290		295		300
His Ala Phe Ala Thr Leu Ser Phe Val Ala Glu Thr Phe Leu Phe Leu				
305		310		315
Tyr Val Gly Met Asp Ala Leu Asp Met Glu Lys Trp Arg Phe Val Ser				320
		325		330
Asp Ser Pro Gly Thr Ser Val Ala Val Ser Ala Val Leu Met Gly Leu				335
		340		345
Val Met Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser				350
		355		360
Asn Leu Ala Lys Lys Ser Thr Ser Glu Lys Ile Ser Phe Arg Glu Gln				365
		370		375
Ile Ile Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala				380
385		390		395
Leu Ala Tyr Asn Gln Phe Thr Arg Gly Gly His Thr Gln Leu Arg Gly				400
		405		410
Asn Ala Ile Met Ile Thr Ser Thr Ile Thr Ile Val Leu Phe Ser Thr				415
		420		425
Val Val Phe Gly Leu Met Thr Lys Pro Leu Ile Arg Phe Leu Leu Pro				430
		435		440
His Pro Lys Pro Thr Ala Ser Met Leu Ser Asp Gln Ser Thr Pro Lys				445
450		455		460
Ser Met Glu Ala Pro Phe Leu Gly Ser Gly Gln Asp Ser Phe Asp Asp				465
465		470		475
Ser Leu Ile Gly Val His Arg Pro Asn Ser Ile Arg Ala Leu Leu Thr				480
		485		490
Thr Pro Ala His Thr Val His Tyr Tyr Trp Arg Lys Phe Asp Asn Ala				495
		500		505
Phe Met Arg Pro Met Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro				510
		515		520
Gly Ser Pro Thr Glu Arg Ser Glu Pro Asn Leu Pro Gln Trp Gln				525
530		535		540

<210> 35

<211> 557

<212> PRT

<213> Suaeda maritima

<400> 35

Met Trp Ser Gln Leu Ser Ser Phe Phe Ala Ser Lys Met Asp Met Val		
1	5	10
Ser Thr Ser Asp His Ala Ser Val Val Ser Met Asn Leu Phe Val Ala		15
	20	25
Leu Leu Cys Gly Cys Ile Val Ile Gly His Leu Leu Glu Glu Asn Arg		30
	35	40
Trp Met Asn Glu Ser Ile Thr Ala Leu Leu Ile Gly Leu Ser Thr Gly		45
50	55	60
Ile Ile Ile Leu Leu Ile Ser Gly Gly Lys Ser Ser His Leu Leu Val		65
65	70	75
Phe Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe		80
	85	90
Asn Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ile		95
	100	105
Thr Ile Ile Leu Phe Gly Ala Val Gly Thr Leu Val Ser Phe Ile Ile		110
	115	120
Ile Ser Leu Gly Ser Ile Ala Ile Phe Gln Lys Met Asp Ile Gly Ser		125
130	135	140

Leu	Glu	Leu	Gly	Asp	Leu	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ala	Ala	Thr	145	150	155	160
Asp	Ser	Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Asp	Glu	Thr	Pro	Leu	165	170	175	
Leu	Tyr	Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser	180	185	190	
Val	Val	Leu	Phe	Asn	Ala	Ile	Gln	Asn	Phe	Asp	Leu	Thr	His	Ile	Asp	195	200	205	
His	Arg	Ile	Ala	Tyr	Arg	Ile	Ala	Phe	Gln	Phe	Gly	Gly	Asn	Phe	Leu	210	215	220	
Tyr	Leu	Phe	Phe	Ala	Ser	Thr	Leu	Leu	Gly	Ala	Val	Thr	Gly	Leu	Leu	225	230	235	240
Ser	Ala	Tyr	Val	Ile	Lys	Lys	Leu	Tyr	Phe	Gly	Arg	His	Ser	Thr	Asp	245	250	255	
Arg	Glu	Val	Ala	Leu	Met	Met	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	260	265	270	
Ala	Glu	Leu	Phe	Tyr	Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Cys	Gly	275	280	285	
Ile	Val	Met	Ser	His	Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	290	295	300	
Val	Thr	Thr	Lys	His	Ala	Phe	Ala	Thr	Leu	Ser	Phe	Val	Ala	Glu	Ile	305	310	315	320
Phe	Ile	Phe	Leu	Tyr	Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	325	330	335	
Arg	Phe	Val	Ser	Asp	Ser	Pro	Gly	Thr	Ser	Val	Ala	Val	Ser	Ser	Ile	340	345	350	
Leu	Leu	Gly	Leu	Leu	Met	Val	Gly	Arg	Ala	Leu	Leu	Phe	Ser	Leu	Val	355	360	365	
Phe	Leu	Met	Asn	Leu	Ser	Lys	Lys	Ser	Asn	Ser	Glu	Lys	Val	Thr	Phe	370	375	380	
Asn	Gln	Gln	Ile	Val	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	385	390	395	400
Ser	Val	Ala	Leu	Ala	Tyr	Asn	Gln	Phe	Ser	Arg	Ser	Gly	His	Thr	Gln	405	410	415	
Leu	Arg	Gly	Asn	Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Thr	Val	Val	Leu	420	425	430	
Phe	Ser	Thr	Met	Val	Phe	Gly	Leu	Leu	Thr	Lys	Pro	Leu	Ile	Leu	Phe	435	440	445	
Met	Leu	Pro	Gln	Pro	Lys	His	Phe	Thr	Ser	Ala	Ser	Thr	Val	Ser	Asp	450	455	460	
Leu	Gly	Ser	Pro	Lys	Ser	Phe	Ser	Leu	Pro	Leu	Glu	Asp	Arg	Gln		465	470	475	480
Asp	Ser	Glu	Ala	Asp	Leu	Gly	Asn	Asp	Asp	Glu	Glu	Ala	Tyr	Pro	Arg	485	490	495	
Gly	Thr	Ile	Ala	Arg	Pro	Thr	Ser	Leu	Arg	Met	Leu	Leu	Asn	Ala	Pro	500	505	510	
Thr	His	Thr	Val	His	His	Tyr	Trp	Arg	Arg	Phe	Asp	Asp	Tyr	Phe	Met	515	520	525	
Arg	Pro	Val	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly	Ser	530	535	540	
Pro	Thr	Glu	Gln	Ser	Thr	Thr	Asn	Leu	Ser	Gln	Arg	Thr				545	550	555	

<210> 36

<211> 538

<212> PRT

<213> Hordeum vulgare

<400> 36

Met	Ala	Phe	Glu	Val	Val	Ala	Ala	Gln	Leu	Ala	Arg	Leu	Ser	Asp	Ala	1	5	10	15
Leu	Ala	Thr	Ser	Asp	His	Ala	Ser	Val	Val	Ser	Ile	Asn	Leu	Phe	Val	20	25	30	
Ala	Leu	Leu	Cys	Ala	Cys	Ile	Val	Leu	Gly	His	Leu	Leu	Glu	Glu	Asn	35	40	45	
Arg	Trp	Leu	Asn	Glu	Ser	Ile	Thr	Ala	Leu	Ile	Ile	Gly	Leu	Cys	Thr	50	55	60	
Gly	Val	Val	Ile	Leu	Met	Thr	Thr	Lys	Gly	Lys	Ser	Ser	His	Val	Leu	65	70	75	80
Val	Phe	Ser	Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	85	90	95	
Phe	Asn	Ala	Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	100	105	110	
Met	Thr	Ile	Thr	Leu	Phe	Gly	Ala	Val	Gly	Thr	Met	Ile	Ser	Phe	Phe	115	120	125	
Thr	Ile	Ser	Leu	Ala	Ala	Ile	Ala	Ile	Phe	Ser	Lys	Met	Asn	Ile	Gly	130	135	140	
Thr	Leu	Asp	Val	Ser	Asp	Phe	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ser	Ala	145	150	155	160
Thr	Asp	Ser	Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Asp	Glu	Thr	Pro	165	170	175	
Phe	Leu	Tyr	Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	180	185	190	
Ser	Val	Val	Leu	Phe	Asn	Ala	Leu	Gln	Asn	Phe	Asp	Pro	Asn	Gln	Ile	195	200	205	
Asp	Ala	Ile	Val	Ile	Leu	Lys	Phe	Leu	Gly	Asn	Phe	Cys	Tyr	Leu	Phe	210	215	220	
Val	Ser	Ser	Thr	Phe	Leu	Gly	Val	Phe	Ser	Gly	Leu	Leu	Ser	Ala	Tyr	225	230	235	240
Ile	Ile	Lys	Lys	Leu	Tyr	Ile	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Val	245	250	255	
Ala	Leu	Met	Met	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	Ala	Glu	Leu	260	265	270	
Leu	Asp	Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Cys	Gly	Ile	Val	Met	275	280	285	
Ser	His	Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Val	Thr	Thr	290	295	300	
Lys	His	Ala	Phe	Ala	Thr	Leu	Ser	Phe	Ile	Ala	Glu	Thr	Phe	Leu	Phe	305	310	315	320
Leu	Tyr	Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	Lys	Phe	Ala	325	330	335	
Ser	Asp	Ser	Pro	Gly	Lys	Ser	Ile	Gly	Ile	Ser	Ser	Ile	Leu	Leu	Gly	340	345	350	
Leu	Val	Leu	Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	355	360	365	
Ser	Asn	Leu	Thr	Lys	Lys	Thr	Glu	Leu	Glu	Lys	Ile	Ser	Trp	Arg	Gln	370	375	380	
Gln	Ile	Val	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Ile	385	390	395	400
Ala	Leu	Ala	Tyr	Asn	Lys	Phe	Thr	Arg	Ser	Gly	His	Thr	Gln	Leu	His	405	410	415	
Gly	Asn	Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Thr	Val	Val	Leu	Phe	Ser	420	425	430	

Thr Met Leu Phe Gly Ile Leu Thr Lys Pro Leu Ile Arg Phe Leu Leu  
           435                                  440                                  445  
 Pro Ala Ser Ser Asn Gly Asp Pro Ser Glu Pro Ser Ser Pro Lys Ser  
           450                                  455                                  460  
 Leu His Ser Pro Leu Leu Thr Ser Met Leu Gly Ser Asp Met Glu Ala  
 465                                  470                                  475                                  480  
 Pro Leu Pro Ile Val Arg Pro Ser Ser Leu Arg Met Leu Ile Thr Lys  
                                   485                                  490                                  495  
 Pro Thr His Thr Ile His Tyr Tyr Trp Arg Lys Phe Asp Asp Ala Leu  
                                   500                                  505                                  510  
 Met Arg Pro Met Phe Gly Gly Arg Gly Phe Val Pro Tyr Ser Pro Gly  
                                   515                                  520                                  525  
 Ser Pro Thr Asp Pro Asn Val Ile Val Ala  
           530                                  535

<210> 37  
 <211> 540  
 <212> PRT  
 <213> Hordeum brevisubulatum

<400> 37  
 Met Gly Trp Gly Leu Gly Asp Pro Pro Ala Asp Tyr Gly Ser Ile Met  
 1                                  5                                  10                                  15  
 Ala Val Gly Leu Phe Val Ala Leu Met Cys Ile Cys Ile Ile Val Gly  
                                   20                                  25                                  30  
 His Leu Leu Glu Glu Asn Arg Trp Met Asn Glu Ser Thr Thr Ala Leu  
                                   35                                  40                                  45  
 Leu Leu Gly Leu Gly Ala Gly Thr Val Ile Leu Phe Ala Ser Ser Gly  
                                   50                                  55                                  60  
 Lys Asn Ser Arg Leu Met Val Phe Ser Glu Asp Leu Phe Phe Ile Tyr  
 65                                  70                                  75                                  80  
 Leu Leu Pro Pro Ile Ile Phe Asn Ala Gly Phe Gln Val Lys Lys Lys  
                                   85                                  90                                  95  
 Gln Phe Phe Arg Asn Phe Met Thr Ile Thr Leu Phe Ala Val Val Gly  
                                   100                                  105                                  110  
 Thr Leu Ile Ser Phe Ser Ile Ile Ser Leu Gly Ala Met Gly Leu Ile  
                                   115                                  120                                  125  
 Ser Arg Leu Asn Ile Gly Ala Leu Glu Leu Gly Asp Tyr Leu Ala Leu  
                                   130                                  135                                  140  
 Gly Ala Ile Phe Ser Ala Thr Asp Ser Val Cys Thr Leu Gln Val Leu  
 145                                  150                                  155                                  160  
 Ser Gln Asp Glu Thr Pro Phe Leu Tyr Ser Leu Val Phe Gly Glu Gly  
                                   165                                  170                                  175  
 Val Val Asn Asp Ala Thr Ser Val Val Leu Phe Asn Ala Ile Gln Asn  
                                   180                                  185                                  190  
 Phe Asp Leu Gly Asn Phe Ser Ser Leu Lys Phe Leu Gln Phe Ile Gly  
                                   195                                  200                                  205  
 Asn Phe Leu Tyr Leu Phe Gly Ala Ser Thr Phe Leu Gly Val Ala Ser  
                                   210                                  215                                  220  
 Gly Leu Leu Ser Ala Tyr Val Ile Lys Lys Leu Tyr Phe Gly Arg His  
 225                                  230                                  235                                  240  
 Ser Thr Asp Arg Glu Val Ala Ile Met Met Leu Met Ala Tyr Leu Ser  
                                   245                                  250                                  255  
 Tyr Met Leu Ala Glu Leu Leu Asp Leu Ser Gly Ile Leu Thr Val Phe  
                                   260                                  265                                  270  
 Phe Cys Gly Ile Val Met Ser His Tyr Thr Trp His Asn Val Thr Glu

	275					280					285				
Ser	Ser	Arg	Val	Thr	Thr	Lys	His	Ala	Phe	Ala	Thr	Leu	Ser	Phe	Ile
	290					295					300				
Ser	Glu	Thr	Phe	Leu	Phe	Leu	Tyr	Val	Gly	Met	Asp	Ala	Leu	Asp	Ile
305					310					315					320
Glu	Lys	Trp	Lys	Ile	Val	Ser	Glu	Thr	Tyr	Ser	Pro	Met	Lys	Ser	Ile
			325						330					335	
Thr	Leu	Ser	Ser	Ile	Ile	Leu	Ala	Leu	Val	Leu	Val	Ala	Arg	Ala	Ala
			340					345					350		
Phe	Val	Phe	Pro	Leu	Ser	Tyr	Leu	Ser	Asn	Leu	Thr	Lys	Lys	Thr	Ala
		355				360						365			
Gly	Glu	Lys	Ile	Ser	Ile	Arg	Gln	Gln	Val	Ile	Ile	Trp	Trp	Ala	Gly
	370					375					380				
Leu	Met	Arg	Gly	Ala	Val	Ser	Ile	Ala	Leu	Ala	Tyr	Asn	Lys	Phe	Ala
385					390					395					400
Lys	Ser	Gly	His	Thr	Gln	Leu	Pro	Ser	Asn	Ala	Ile	Met	Ile	Thr	Ser
			405						410					415	
Thr	Ile	Ile	Ile	Val	Leu	Phe	Ser	Thr	Ile	Val	Phe	Gly	Leu	Leu	Thr
			420					425					430		
Lys	Pro	Leu	Ile	Arg	Leu	Leu	Ile	Pro	Ala	Arg	His	Leu	Thr	Arg	Glu
		435					440					445			
Val	Ser	Ala	Leu	Ser	Glu	Pro	Ser	Ser	Pro	Lys	Ser	Phe	Leu	Glu	Gln
	450					455					460				
Leu	Thr	Val	Asn	Gly	Pro	Glu	Thr	Asp	Val	Glu	Asn	Gly	Val	Ser	Ile
465				470					475						480
Arg	Arg	Pro	Thr	Ser	Leu	Arg	Met	Leu	Leu	Ala	Ser	Pro	Thr	Arg	Ser
				485				490						495	
Val	His	His	Tyr	Trp	Arg	Lys	Phe	Asp	Asn	Ala	Phe	Met	Arg	Pro	Val
			500					505					510		
Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly	Ser	Pro	Thr	Glu
		515				520						525			
Ser	Ser	Val	Pro	Leu	Leu	Ala	His	Gly	Ser	Glu	Asn				
	530					535					540				

<210> 38

<211> 546

<212> PRT

<213> Hordeum vulgare

<400> 38

Met	Gly	Pro	Asp	Leu	Gly	Ala	Leu	Ala	Leu	Arg	Tyr	Thr	Gly	Leu	Ala
1				5					10					15	
Val	Ser	Asp	His	Asp	Ser	Ile	Val	Ala	Ile	Asn	Ile	Phe	Ile	Ala	Leu
			20					25					30		
Leu	Cys	Gly	Cys	Ile	Val	Phe	Gly	His	Leu	Leu	Glu	Gly	Asn	Arg	Trp
		35					40					45			
Val	Asn	Glu	Ser	Thr	Thr	Ala	Ile	Val	Leu	Gly	Leu	Ile	Thr	Gly	Gly
		50				55					60				
Val	Ile	Leu	Leu	Cys	Thr	Lys	Gly	Val	Asn	Ser	Arg	Ile	Leu	Ile	Phe
65					70					75					80
Ser	Glu	Asp	Ile	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	Phe	Asn
				85					90					95	
Ala	Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	Ala	Thr
			100					105					110		
Ile	Ile	Leu	Phe	Gly	Ala	Val	Gly	Thr	Leu	Ile	Ser	Phe	Val	Ile	Ile
		115					120						125		

